The background of the entire cover is a dense, intricate Mughal carpet pattern. It features a dark navy blue field filled with large, stylized red flowers with dark blue centers. Interspersed among the flowers are various animals: a spotted deer in the upper left, a red bull in the upper right, a spotted leopard in the lower left, and a large orange tiger in the lower center. The animals are depicted in a traditional Mughal style with fine outlines and some internal detailing. The overall composition is balanced and visually rich.

Flowers Underfoot

Indian Carpets of the Mughal Era

THE METROPOLITAN MUSEUM OF ART

Flowers Underfoot



Flowers Underfoot

Indian Carpets of the Mughal Era

DANIEL WALKER

THE METROPOLITAN MUSEUM OF ART

Distributed by Harry N. Abrams, Inc., New York

This catalogue is published in conjunction with the exhibition "Flowers Underfoot: Indian Carpets of the Mughal Era," held at The Metropolitan Museum of Art, New York, November 20, 1997–March 1, 1998.

The exhibition is made possible in part by **ENRON** and the National Endowment for the Arts.

Additional support has been provided by **Dodsal**.

Transportation assistance has been provided by Air India.

This publication is made possible in part by The Hagop Kevorkian Fund and the Marshall and Marilyn R. Wolf Foundation.

Published by The Metropolitan Museum of Art, New York
John P. O'Neill, Editor in Chief
Teresa Egan, Editor
Bruce Campbell, Designer
Matthew Pimm, Production
Alarik W. Skarstrom, Bibliographer
Robert Weisberg, Computer Specialist

Copyright © 1997 by The Metropolitan Museum of Art, New York

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without permission in writing from the publishers.

New photography of works in the collection of The Metropolitan Museum of Art by Anna-Marie Kellen, the Photograph Studio, The Metropolitan Museum of Art.

Figures 14, 15, 42, 103 by Marina Brolin
Map design by Barry Girsh

Jacket/cover illustration: Detail of carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1610–20. Private collection. (Fig. 45; cat. no. 8)

Frontispiece: Detail of pashmina carpet with pattern of lattice and flowers. Northern India, Lahore, ca. 1650. Private collection. (Fig. 104; cat. no. 26)

Color separations by Professional Graphics, Inc., Rockford, Illinois
Typeset in Centaur
Printed and bound by Amilcare Pizzi S.p.A.-Arte grafiche, Milan

Library of Congress Cataloging-in-Publication Data

Walker, Daniel S.
Flowers underfoot : Indian carpets of the Mughal era / Daniel Walker.

p. cm.

Catalog of an exhibition held at the Metropolitan Museum of Art, Nov. 20, 1997–Mar. 1, 1998.

Includes bibliographical references and index.

ISBN 0-87099-787-4 (hc). — ISBN 0-87099-788-2 (pbk. : alk. paper). — ISBN 0-8109-6510-0 (Abrams)

1. Rugs, Mogul—Exhibitions. 2. Rugs—India—Themes, motives—Exhibitions. I. Metropolitan Museum of Art (New York, N.Y.) II. Title.

NK2876.W36 1997

746.754'074747'1—dc21

97-36638

CIP

*The garden-nymphs [the flowers] were brilliant,
Their cheeks shone like lamps;
There were fragrant buds on their stems (or “under their rind”),
Like dark amulets on the arms of the beloved.
The wakeful, ode-rehearsing nightingale
Whetted the desires of wine-drinkers;
At each fountain the duck dipped his beak
Like golden scissors cutting silk;
There were flower-carpets and fresh rosebuds,
The wind fanned the lamps of the roses,
The violet braided her locks,
The buds tied a knot in the heart.*

—Recited by the Emperor Jahāngīr, describing the meadows of Kashmir

Contents

<i>Director's Foreword</i>	ix
<i>Acknowledgments</i>	xi
<i>Lenders to the Exhibition</i>	xiii
<i>Introduction</i>	xv
<i>Map: India in the Seventeenth Century</i>	xix
1. India During the Mughal Era	3
2. International Commerce	15
3. Technical Characteristics	21
4. The Carpets	29
THE PERSIAN STYLE	29
<i>Fantastic-Animal Pattern</i>	33
<i>Pictorial Designs</i>	37
<i>Scrolling-Vine-and-Animal Pattern</i>	45
<i>Scrolling-Vine-and-Blossom Pattern</i>	57
<i>Fine-Weave Type</i>	68
THE FLOWER STYLE	86
<i>Single-Flower Design</i>	88
<i>Rows of Flowers or Trees</i>	95
<i>Lattice-and-Flower Pattern</i>	105
<i>Lattice-and-Blossom Pattern</i>	107
<i>Attribution and Provenance</i>	113
LATER CARPET TYPES	117
<i>Durbar (Audience) Type</i>	118
<i>Millefleur</i>	119
<i>Multiple-Niche Prayer Type (Saph)</i>	129
<i>The Kyoto Group</i>	136
<i>Silks</i>	147

Appendix I	151
<i>Microscopic Analysis of Animal Fibers Found in Classical Indian and Persian Carpets</i> , Martin N. Youngberg	
Appendix 2A	155
<i>Natural Dyes in the Near and Middle East and India</i> , Harald Böhmer	
Appendix 2B	160
<i>Dye Analysis of Classical Indian and Persian Carpets</i> , Recep Karadağ, Nevin Enez, and Harald Böhmer	
<i>Checklist of the Exhibition</i>	163
<i>Notes</i>	175
<i>Glossary</i>	181
<i>Bibliography</i>	183
<i>Index</i>	191
<i>Photograph Credits</i>	199

Director's Foreword

With the exhibition "Flowers Underfoot: Indian Carpets of the Mughal Era," The Metropolitan Museum of Art pays tribute to India, as the country celebrates its fiftieth year of independence. The exhibition features works from the sixteenth to the eighteenth century, the period during which Indian carpet weavers produced their most stunning works. Despite their breathtakingly delicate beauty, Indian carpets are little known even to carpet experts, so "Flowers Underfoot: Indian Carpets of the Mughal Era" and the accompanying catalogue are crucial additions to both the study of Indian art and carpet studies. The Metropolitan Museum has chosen to honor this historic year for India by highlighting a glorious part of her heritage that has until now been regrettably neglected. This exhibition has grown from the work of Daniel Walker, Patti Cadby Birch Curator of Islamic Art, who has been devoted to the research of Indian carpets for twenty years; his vision and scholarship illuminate the beauty of these works.

Indian carpets are very difficult to study as a group since there are about five hundred surviving pieces, a large number of which are scattered in private collections around the world. Consequently, a long period of research was necessary to gather information on the extant pieces and to have an understanding of this impressive body of material. The exhibition and its catalogue constitute the first in-depth study of Indian carpets and will surely take their rightful places in the history of carpet studies.

The works in the exhibition represent the broad range of carpets produced during the most artistically creative and prolific period of the Mughal Empire. The discussion of carpets in the catalogue roughly follows a chronological development. The earliest works are from the period of the Mughal emperor Akbar (r. 1556–1605), an active patron, who is believed to have established the first imperial carpet workshops in India. These carpets combine the dynamism of Akbar's reign with traces of Persian

design (due to the large number of Persian artists who immigrated to India at this time). The basic elements of Mughal design were established during this period; they can also be traced in later works. Akbar's son Jahāngīr (r. 1605–27) succeeded to the throne, and his relatively peaceful period of rule allowed further concentration on the arts. The Persian style continued to dominate court aesthetics during Jahāngīr's reign, but it became quite different from its Persian prototypes and acquired a distinctly Indian character. It was during the reign of Jahāngīr's son, Shāh Jahān (r. 1628–58), that the flower style in Indian art came into popular use. This aesthetic was characterized by naturalistic flowers, either arranged in rows or shown against a plain background. The flower style came to dominate not only carpet design but all aspects of Mughal art. Later examples of Indian carpet design built on these classical examples, and various styles evolved. A unique aspect of Indian carpets is the choice of materials. Although in many carpet-making societies the most luxurious carpets have silk pile, in Indian carpets of the highest grade pashmina wool was the choice pile material. Pashmina is the wool of Himalayan mountain goats and therefore was imported to India, which shows that it was not the convenience of available materials but deliberate selection that led to its use. The same material is used in shawls from Kashmir, which contributed the word *cashmere* to the English language.

The carpets exhibited in "Flowers Underfoot: Indian Carpets of the Mughal Era" are among the best surviving examples of the classical period of Indian carpets from distinguished lenders around the world. A number of pashmina examples are included. We are proud that seven carpets from the Museum's own collection—one of the most comprehensive and finest collections of Oriental carpets to be found anywhere—are part of this distinguished array. On this occasion we are pleased to have the opportunity to share more of the Indian jewels of our carpet collection with our visitors than our permanent



display permits. Most of our choicest pieces were gifts of retailer Benjamin Altman in 1913 and financier J. Pierpont Morgan in 1917. Both were avid collectors and generous benefactors to the Museum.

That the Museum has been able to bring together such an outstanding assemblage of Indian carpets is due entirely to the generosity of our many lenders, to all of whom the Museum offers its sincere thanks.

In India, we are grateful to B. P. Singh, Secretary, Department of Culture in the Ministry of Human Resource Development, for his assistance. We offer special thanks to His Highness Brigadier Sawai Bhawani Singh, Maharaja of Jaipur, and the Trustees of the Maharaja Sawai Man Singh II Museum, as well as to Martand Singh for facilitating our efforts in Jaipur. Indeed it is a signal privilege for the Metropolitan Museum to have undertaken the conservation of the grand pashmina carpet from Jaipur. This effort, which will ensure that the carpet is enjoyed in Jaipur by future generations of museum visitors, was undertaken by the Metropolitan as a special gift to India during her anniversary year. We also acknowledge, with gratitude, the generous assistance and hospitality we have received from the Metropolitan's many friends in India during the years that this exhibition has been in the making.

In Japan, other very special loans are from the Gion Matsuri Preservation Associations in Kyoto.

Their carpets are with us due to the assistance of Shigeru Fukami, Chairman, and Kojiro Yoshida, Vice-Chairman, of the Gion Matsuri Preservation Associations. We are most thankful to the members of the Minami-Kannon-yama, Kanko-boko, Tsukiboko, and Kita-Kannon-yama Preservation Associations for allowing their prized possessions to travel.

Since 1634, the Girdlers' carpet, made for the Girdlers' Company of England in 1630–32, has been allowed to leave its permanent home in the Girdlers' Hall, London, only once before. For their exceptional generosity we offer special thanks to the members of the Girdlers' Company.

The Museum gratefully acknowledges substantial support from Enron and the National Endowment for the Arts. Additional support was received from Dodsal. Transportation assistance has been provided by Air India. Without their collective generosity, the exhibition would not have been possible. We are also deeply indebted to The Hagop Kevorkian Fund and the Marshall and Marilyn R. Wolf Foundation for their continued dedication to this project and their contributions toward this publication.

Philippe de Montebello
Director
The Metropolitan Museum of Art

Acknowledgments

I wish to express my deepest thanks, first of all, to the many lenders, institutional and private, who supported my research efforts and agreed to participate in the exhibition: Ashmolean Museum, Oxford: Prof. Christopher White, Director, Prof. James Allan, Keeper, Department of Eastern Art, Andrew Topsfield, Curator of Indian Art; The Duke of Buccleuch, Broughton House, Northamptonshire, and Gareth Fitzpatrick, Director; Cincinnati Art Museum: Barbara Gibbs, Director, Dr. Glenn Markoe, Curator of Classical and Near Eastern Art, Ellen Avril, Assistant Curator of Classical, Near and Far Eastern Art; The Corcoran Gallery of Art, Washington, D.C.: David C. Levy, Director and President, Dr. Jack Cowart, Deputy Director and Chief Curator; Dar al-Athar al-Islamiyyah, Kuwait Museum of Islamic Art, Safat: Sheikh Nasser Sabah al-Ahmad al-Sabah, Sheikh Hussah Sabah al-Salem al-Sabah, Director; The Detroit Institute of Arts: Samuel Sachs II, former Director, Elsie Peck, Curator of Near Eastern and Ancient Art; Gion Matsuri Preservation Associations, Kyoto: Shigeru Fukami, Chairman, Kojiro Yoshida, Vice-Chairman, and the members of the Kanko-boko, Kita-Kannon-yama, Minami-Kannon-yama, Tsukiboko Preservation Associations; Sir Howard Hodgkin, London; Maharaja Sawai Man Singh II Museum, Jaipur: His Highness Brigadier Sawai Bhawani Singh, Maharaja of Jaipur; Musée des Arts Décoratifs, Paris: Pierre Arizzoli-Clémentel, Conservateur Général Chargé des Musées, Evelyne Possémé, Conservatrice; Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon: Dra. Maria Teresa Gomes Ferreira, Director, Dra. Maria Fernanda Passos Leite, Museum Department, Chief Curator; Museum für Islamische Kunst, Staatliche Museen zu Berlin—Preussischer Kulturbesitz: Dr. Volkmar Enderlein, Director, Dr. Jens Kröger, Deputy Director; Museum of Fine Arts, Boston: Dr. Malcolm Rogers, Director, Anne Poulet, Curator of European Sculpture and Decorative Arts; The National Gallery of Art, Washington, D.C.: Earl A. Powell II, Director;

Nationalmuseum, Stockholm: Olle Granath, Director, Barbro Hovstadius, Curator of Decorative Arts; Österreichisches Museum für Angewandte Kunst, Vienna: Peter Noever, Director, Dr. Angela Völker, Curator of Textiles; The Textile Museum, Washington, D.C.: Ursula E. McCracken, Director, Dr. Carol Bier, Curator of Eastern Hemisphere Textiles; The Carmen Thyssen-Bornemisza Collection and the Fundación Colección Thyssen-Bornemisza, Madrid: Tomás Llorens, Chief Curator; The Toyama Memorial Museum, Saitama: Prof. Naoshi Tomobe, Director, Hiroshi Yamanobe, Curator in Charge; Marshall and Marilyn R. Wolf, New York; The Worshipful Company of Girdlers, London: David James, Master, Ian Fairclough, Past Master, Lieutenant Colonel Richard Sullivan, Clerk; and those who lent anonymously.

The survey offered in this publication is more complete than it otherwise might have been due to contributions from several experts, and I am truly grateful for their collaboration: Martin N. Youngberg, for his work on wool; Dr. Harald Böhmer, Prof. Dr. Nevin Enez, and Dr. Recep Karadağ, for their studies of dyes; Dr. Liliane Masschelein-Kleiner, Dr. Jan Wouters, Won Ng, and Chris McGlinchey, for their work on dye analyses; Dr. Chandramani Singh and Dr. Gopal Narain Bahura, for their readings and translations of archival material in Jaipur; and Yaduendra Sahai, for his expert knowledge of the history of the Jaipur Collection.

Dealing with carpets, more than with most works of art, can be particularly time consuming and retrieving them from storage is labor-intensive, so I wish to acknowledge my debt to the many individuals who have generously assisted me in my research over the past twenty years. Those not already mentioned include: Hossain Afshar, Julian Agnew, Robert Alderman, Julia Bailey, M. Balakotaiah, the late May Beattie, Marthe Bernus-Taylor, Vojtech Blau, Alessandro



Bruschettini, Marianne Carlano, John Carswell, Sheel Chandra, Dominique Chevalier, Steven Cohen, Rosemary Crill, Mitchell Crites, Marino and Klara Dall'Oglio, Asok Kumar Das, Susan Day, Walter Denny, Jasleen Dhamija, Layla Diba, John Eskenazi, William Ffrench, Dorothy Fickle, Kjeld von Folsach, Francesca Galloway, Nadine Gasc, Ebelte Hartkamp, Sumbul Hassan, Bernhard Heitman, the late John Hewett, Jenny and David Housego, Kazuko Ikeda, Norman and Rina Indictor, Anatol Ivanov, the late C. John, M. K. Joshi, Nanette Kelekian, Steven Kossak, Krishna Lal, Ursula Lienert, Louise Mackie, Alan Marcuson, Terence McInerney, the late Michael Meinecke, Yves Mikaeloff, Yutaka Mino, Jagdish Mittal, Bashir Muhammad, Sadiq Naqvi, Mary Jo Otsea, Nick Pearce, Jan Pincket, Jeremy Pine, M.V. Rao, J. K. Reddiye, Krishna Riboud, William Robinson, Bill Ruprecht, the late Larry Salmon, Gira Sarabai, Danny Shaffer, Teresa Pacheco Shneider, Shreve Simpson, Rozi Singh, Robert Skelton, Michael Spink, Friedrich Spuhler, Vijai Shankar Srivastava, Ursula Strate, David Sylvester, Tsuneo Tanaka, Jon Thompson, Rebecca Tiger, the Time and Talents Club, Music and Arts Committee, Bombay, especially Mehroo Jeejeebhoy and Rashmi Poddar, Yoshinobu Tokugawa, the Honorable Mrs. Townshend, Edmund de Unger, Lotika Varadarajan, Roger Waine, Anne Wardwell, Stuart Cary Welch, Donna Welton, Blanda Winter, Sara Wolf, Sachio Yoshioka, Sophie Younger, Mark Zebrowski, and Asiyeh Ziai-Qaragozlou.

Within the Museum, I owe a special debt to Philippe de Montebello, Director, and to Mahrukh Tarapor, Associate Director for Exhibitions, who have supported the idea for such an exhibition from the moment it was first mentioned. Members of the Editorial Department are recognized for their total professionalism and meaningful encouragement: Editor in Chief John P. O'Neill; editor Teresa Egan, who, with deft strokes of her green pencil, saved the reader from numerous infelicitous turns of phrase; Alarik W. Skarstrom, bibliographer; Matthew Pimm, production manager; Bruce

Campbell, designer; Mary W. Smith and Robert Weisberg, computer specialists; and Peter Rooney, indexer. The exhibition itself has benefited from the skills and cooperation of many on the Museum staff, among them Linda Sylling, Associate Manager for Operations and Special Exhibitions; Jeffrey L. Daly, Michael C. Batista, Sophia Geronimus, and Zack Zanolli of the Design Department; Textile Conservators Nobuko Kajitani, Shelley Greenspan, and Florica Zaharia; and Franz Schmidt, Manager for Special Projects. My own staff in the Department of Islamic Art has been extremely helpful and supportive, and I wish to acknowledge in particular the contributions of Stefano Carboni and Patricia Sclater-Booth, who have willingly shouldered a far greater administrative burden than usual over the last many months, and Negar Baharlou, for considerable help with carpet reconstruction, transliteration issues, and administrative matters.

Finally, I want to thank several people who have played special roles in the realization of this publication and exhibition. My research assistants, first Aimée Froom and then Emine Fetvacı, have been the most conscientious, intelligent helpers one could have, for tasks large and small. Michael Franses has been very generous in sharing his enviable knowledge and valuable contacts. Dear friend Ellen Smart has been extremely helpful in reviewing the manuscript, saving me from several errors, and in discussing flower identifications and depictions of carpets in Indian painting. Nobuko Kajitani, esteemed colleague and friend of long standing, has been supportive in many ways, always willing to provide wise counsel and share her profound knowledge. A special debt to the late Charles Grant Ellis is acknowledged. It was "Uncle Charlie" who introduced me to the complex issues involved in the study of Persian and Indian carpets, and I shall always be grateful for his generosity of spirit and willingness to share the fruits of his own research. Last but not at all least, I acknowledge the love and patience of Julia, Erin, and Stefanie, to whom this volume is dedicated.

D.W.

Lenders to the Exhibition

(Folios refer to catalogue numbers in the Checklist of the Exhibition)

AUSTRIA

Vienna

Österreichisches Museum für Angewandte Kunst
3, 35

ENGLAND

London

The Worshipful Company of Girdlers 14
Howard Hodgkin 7b, 7c

Northamptonshire

His Grace, the Duke of Buccleuch and
Queensberry K.T., Boughton House 42

Oxford

Ashmolean Museum 34

FRANCE

Paris

Musée des Arts Décoratifs 16a, 16c

GERMANY

Berlin

Museum für Islamische Kunst, Staatliche Museen
zu Berlin–Preussischer Kulturbesitz 6

INDIA

Jaipur

Maharaja Sawai Man Singh II Museum 28

JAPAN

Kyoto

Gion Matsuri Preservation Associations
Kanko-boko 39
Kita-Kannon-yama 40
Minami-Kannon-yama 41
Tsuki-boko 13

Saitama

The Toyama Memorial Museum 9

KUWAIT

Safat

Dar al-Athar al-Islamiyyah, Kuwait Museum of
Islamic Art 43

PORTUGAL

Lisbon

Museu Calouste Gulbenkian, Calouste Gulbenkian
Foundation 11, 17, 31

SPAIN

Madrid

Fundación Colección Thyssen-Bornemisza 21
(on loan from the Carmen Thyssen-Bornemisza
Collection)

SWEDEN

Stockholm

Nationalmuseum 16b

UNITED STATES

Boston

Museum of Fine Arts 2

Cincinnati

Cincinnati Art Museum 25, 44

Detroit

The Detroit Institute of Arts 1a, 12

New York

The Marshall and Marilyn R. Wolf Collection 38

Washington, D.C.

The Corcoran Gallery of Art 15
The National Gallery of Art 10
The Textile Museum 1b, 5, 7a
Private collections 8, 19, 23, 26, 32, 33, 37

Introduction

Early Indian carpets comprise the last major group of classical Oriental carpets to become the objects of scholarly study. They have been trivialized by some as being derivative, based too strictly on Persian carpets to be considered original or too dependent on the art of manuscript illustration to be truly carpetlike in appearance. Indian carpets are unfamiliar to many viewers because they are difficult to find in any quantity: few collections own more than one or two, numerous important pieces remain in private hands, and many examples remain in India. Despite the popular impression that few classical Indian carpets have survived the ravages of climate, vermin, and time, more than five hundred examples exist today—some intact, others fragmentary—representing many different types, patterns, and generations, and forming a very substantial body of material.

Indian carpet designers and weavers have made distinct and meaningful contributions to the Oriental tradition of carpet weaving; in itself this is ample justification for giving Indian carpets the attention they have generally been denied. First, the most technically accomplished classical carpets of all time were woven in India. (Throughout this publication, geographical terms should be understood in a seventeenth-century context. The historic India thus encompasses modern-day India and Pakistan, and Lahore is considered as part of northern India.) These are the pieces made with pile of fine goat's hair (cashmere wool, or pashmina) on silk foundations, with knot counts occasionally approaching (and in one case exceeding) two thousand per square inch. These textiles should not be considered just as a technical tour de force, however, for they are works of art of great sensitivity and beauty. Indian carpet weavers were not the first to employ pashmina, but it was certainly they who fully exploited the marvelous properties of this material as a pile fiber. Second, Indian carpet weavers, more than any others, were really

painters: they learned to employ dyed yarns just as painters used pigments, which resulted in a coloristic range and sophistication otherwise unknown. Yarns of different colors were directly mixed or used in combination to yield new hues or subtle variations on existing ones. And third, there was also a stylistic contribution. It is true that in the earlier years of court carpet production, from about 1580 to 1630 or so, the patterns of Indian carpets were heavily dependent upon Persian models (nevertheless displaying an unmistakably Indian aesthetic). But then a particular fashion for formally but naturalistically depicted flowers came into vogue. This truly indigenous style came to dominate Indian ornamentation in all media and even influenced foreign artistic production, particularly in Iran, perhaps as a result of carpet or textile imports.

It is worthwhile to review briefly the history of the study of Indian carpets. Unlike that of many fields, progress in this area has not been marked in steady increments and gradual clarification; rather, an enviable (although slightly flawed) body of knowledge evolved early in this century, but only slow and relatively minor refinement has followed. A microcosmic view of this trend and the relative state of knowledge can be gained through the example of one of the standard works on Oriental carpets and its several revisions over the years. The first edition of Wilhelm von Bode's *Vorderasiatische Knüpfteppiche aus Ältere Zeit* appeared in 1901, an expanded version of an article published in 1892. Although the article contained no references to or illustrations of Indian carpets, the 1901 volume included three but identified each as Persian (one, the pictorial rug in Vienna, is in the present volume as fig. 31; cat. no. 3). A second edition, revised, with contributions by Ernst Kühnel was published in German in 1914. This edition was reorganized into more valid and useful categories; Indian carpets were removed from the



Persian groups and given their own brief chapter entitled “Die indopersischen Teppiche,” reflecting the perception that these were Persian-style pieces woven in India. Five examples were shown, including the fantastic-animal fragment now in Detroit (fig. 21; cat. no. 1a), but with the then owner incorrectly identified.

The third (revised) edition of Bode–Kühnel, as it has come to be known, was published in German in 1922, and an English edition, *Antique Rugs from the Near East*, translated by R. M. Riefstahl, came out the same year. The Indian chapter shows little change, just the addition of one illustration, the pictorial rug in Boston (fig. 29; cat. no. 2). The fourth edition was revised and published in German in 1955, and an English version, translated by Charles Grant Ellis, followed three years later. This edition shows considerable revision throughout, and Kühnel is for the first time given full billing as co-author. The Indian chapter, now called “Mogul Rugs from India,” is still brief and has only five illustrations but indicates an awareness of more variety in patterns and a recognition of high quality in likening the wool (still not identified as pashmina) to the fineness of velvets. The strength of the concluding sentence (the fine pieces “take their place among the most outstanding achievements of the art of knotting”), with which this author concurs, stands in sharp contrast to the brevity and superficiality of the section. In 1984, the English version of the fourth edition was reissued with minimal text changes but revised captions. The Indian section seems unchanged. The translator, himself a great authority on classical carpets, had by this time formed his own strong opinions—sometimes in sharp variance to those held in Bode–Kühnel—about Indian carpets, and it is surprising that the translator’s notes do not reflect this.

The most significant changes to the Indian chapter of Bode–Kühnel occurred in the 1914 edition following the publication of two works of seminal importance. In 1905 appeared Colonel T. H. Hendley’s *Asian Carpets: XVI. and XVII. Century Designs from the Jaipur Palaces*, containing valuable descriptions and one hundred plates of carpets belonging to the maharaja of Jaipur (there are also fifty plates illustrating carpets in other collections). Short on analysis, Hendley’s volume nevertheless brought recognition to the Indian carpet for the first time. This was followed in

1908 by the monumental *History of Oriental Carpets before 1800* by F. R. Martin, Swedish diplomat, collector, and connoisseur. Although flawed in its chronology and dating, Martin’s work coherently presented a vast quantity of new material, and it stands as the basis for the 1914 edition of Bode–Kühnel (and later ones as well), and of all discussions since.

Over the last twenty years or so, several publications have broadened the discussion of Indian carpets. Murray Eiland’s 1979 publication, *Chinese and Exotic Rugs*, contains the lengthiest treatment of Indian carpets to date and is the first to pay proper attention to technical issues, but it will mislead the unwary reader with attributions of Persian carpets to India and speculation that multistrand (more than four) warps mean late production. A 1982 issue of the journal *Hali* focused on Indian carpets with essays on eight fine examples by different experts and an article by the author on classical Indian carpets that included two types now felt to be Persian (more on this below). Erwin Gans-Ruedin’s *Indian Carpets* of 1984 makes no effort at synthesis but presents a wealth of illustrations, including some of unfamiliar material. Two studies of individual carpets are of special merit: John Irwin’s booklet on the Girdlers’ carpet (fig. 62; cat. no. 14), published in 1962, and Steven Cohen’s recent and commendably thorough treatment of the fantastic-animal fragments (figs. 21, 22; cat. nos. 1a, 1b).

Beginning with the great Vienna exhibition of 1891, exhibitions of classical carpets have typically included very few Indian pieces (the Vienna exhibition had three, each identified as Persian), whereas exhibitions of Indian art have occasionally had a handful or more of Indian carpets. The 1947–48 London exhibition, *The Art of India and Pakistan*, featured thirteen carpets, including the Girdlers’ carpet, the only occasion prior to the present one that the carpet has left Girdlers’ Hall in London since 1634. *The Indian Heritage: Court Life and Arts under Mughal Rule*, organized in 1982 at the Victoria and Albert Museum in London, also had thirteen carpets. These two exhibitions represent the largest clusters of Indian carpets assembled from diverse sources until the present exhibition.

This study and the exhibition it accompanies focus on Indian carpets of the “classical” period, that is, from about 1580 to 1800. The earlier date is established by the proposed dating of the oldest

surviving Indian carpet, the fantastic-animal fragments. The later date is more arbitrary, selected because carpets and relevant documentation are relatively plentiful until that time, and because the carpets themselves show a clear and continuing line of development from the superb court production of the seventeenth century. It was also about 1800 that Mughal rulers became mere puppets of the British in India. Carpet weaving in the nineteenth century is imperfectly understood and seems poorly represented until the advent of commercial production in the latter decades of the century,¹ when older styles were perpetuated through copies instead of continuing tradition.

In the absence of an adequate survey of Indian carpets, it was decided to present this text as a monographic study, with chapters treating history, commerce, technical issues, and the carpets themselves, rather than in the more conventional catalogue format of essay and substantial entries. A checklist of the exhibition is included so that the publication can still serve as a catalogue. In one sense this study is a survey of Indian carpet weaving until 1800, but it is in fact a survey of the best that tradition produced. Over five hundred pieces survive and only about ten percent are represented in the exhibition. But apart from a very few pieces that were not available for loan, mainly for reasons of condition, this ten percent represents, or is typical of, the highest level of achievement.

The astute reader may notice the wording of the title, which concludes with the phrase “of the Mughal Era,” and wonder if these carpets are not all Mughal. Certain types of carpets surely are: the finest pashmina pieces, for example, represent the top production of the court workshop in Kashmir and perhaps Lahore. In other cases it is more difficult to say. Carpets in the flower style popularized by Shāh Jahān were depicted in Mughal paintings and might have been woven in court workshops, but many were acquired and probably even commissioned by Rajput patrons as well. And in the case of the Deccan, the south-central plateau area, there is a semantic problem. The Deccan in its totality was part of the Mughal dominion just from 1687 until 1722, so theoretically only carpets woven during that period, especially when they conform to Mughal taste, ought to be called Mughal. None of the carpets attributed in this volume to the Deccan can be assigned with

certainty to that precise period. In the end, then, it seems wiser not to impose an identifying label on the carpets that is too strict.

A few words should be said about what the present study does *not* include. Because flat weaves represent an independent weaving tradition, only pile carpets are treated in this study. Two types of pile carpets thought by some specialists to be Indian are excluded because the author now believes, contrary to the opinion put forth in a 1982 article,² that they are Persian. These are the Portuguese type, so named for the maritime scenes whose ships and figures have been called Portuguese, and the Indo-Persian group, commercial successors to the Persian Herāt type. The Indo-Persian question in particular has become very controversial over the last generation, chiefly because of the opinions of two highly respected specialists. May Beattie, seeking a way to explain differences in coloring and style, proposed that certain examples might well be Indian,³ whereas Charles Grant Ellis took the more extreme step of assigning the whole group to India, specifically Agra.⁴ These judgments notwithstanding, the author believes that technical and design features link the Indo-Persian carpets to other Persian production. This is a subject that deserves its own detailed study.

The overview that follows draws on many kinds of evidence. The accounts of travelers to India, chronicles by the historians of the Mughal court (on specific events as well as on the laws and organization of the empire), and the memoirs of the emperors themselves have all been consulted, although it is often impossible to match verbal information with surviving carpets. Records of the various trading companies contain extremely important information about sources, commercial value, and even specific carpets, such as the Girdlers'. Crucial inventory documentation has been kept particularly for carpets in the collection of the maharaja of Jaipur (the source of a number of the carpets now in collections around the world) and the Gion Matsuri Preservation Associations in Kyoto, Japan. The latter has been published,⁵ but the former is available only in an unpublished report of 1929 written by A. J. D. Campbell of the Victoria and Albert Museum, London. It was originally thought that translations of the Jaipur inventory labels and register, ably performed by Dr. Chandramani Singh and Dr. Gopal Narain





Bahura, could be included in this volume, but the value of that material chiefly to specialists argues that it be made available through other means. Paintings, both Indian and European, can often be helpful in issues of dating, although Indian representations of carpets are difficult to judge and are rarely to be taken as literal depictions of contemporaneous pieces. Finally, there are the carpets themselves, whose patterns, materials, construction, and colors (and just one inscription) speak volumes about their manufacture if we are prepared to listen.

NOTE ON TRANSLITERATION: The transliteration system utilized here for Persian and Arabic words, a slightly modified version of the system used by the Library of Congress, is the one adopted for general use by the Department of Islamic Art. It has been employed for words not having come into general English usage (according to *Webster's Third New International Dictionary*, *Webster's New Geographical Dictionary*, and *Webster's New Biographical Dictionary*).



India in the seventeenth century

Flowers Underfoot

India During the Mughal Era

The Mughal era began in 1526 when a Muslim prince named Bābur invaded northern India from his homeland in Central Asia. Invited to intervene by a discontented faction of the weak Lodī government at Delhi, Bābur defeated the Lodī army at Panipat in 1526 and the next year overpowered combined Rajput forces near Agra. Bābur was of Chaghatay Turkish and Mongol (from which the term “Mughal” was derived) stock, descended from two renowned conquerors, Timur (Tamerlane) and Chingiz Khan. This regal lineage understandably served as a point of pride for future Mughal rulers. Bābur’s dominion in India was not an empire; when he died, just four years after assuming power, the borders were not secure and no effective central governing authority had been established. Bābur had little time to be a patron of the arts, and few buildings or objects survive from his reign. But we know from his autobiography that, like his successors, Bābur was interested in architecture, painting, and music, and was himself a poet.

Bābur’s son Humāyūn was twenty-three when he assumed the throne in 1530. His reign began on a positive note when he led his army to victory in Gujarat. He settled in Agra, where he led a life of pleasure until Afghan forces led by Shīr Shāh Sūr, formerly one of Bābur’s officers, drove him from India. Humāyūn sought refuge in Shāh Ṭahmāsp’s Persia and made his residence at Kabul. He bided his time until an incompetent heir succeeded to Shīr Shāh’s throne in 1555. Then, with Safavid military help (given in exchange for the city of Kandahār), he reestablished Mughal authority in Delhi and Agra. He died only six months later from a fall, his realm virtually the same one he inherited.

Despite the instability and intermittent character of his rule in India, Humāyūn’s artistic legacy there is enormously important. The visual arts in early Safavid Iran had reached new heights of sophistica-

tion and technical brilliance under the enlightened patronage of Ṭahmāsp. But about 1540, as Ṭahmāsp’s tastes became austere, he turned away from the arts. As a result, patronage declined, and many fine artists left the service of the court. Two distinguished painters, Mīr Sayyid ‘Alī and ‘Abd al-Ṣamad, joined Humāyūn in Kabul in 1549 and went with him when he returned to India, where, working with Hindu and Muslim painters, they founded the Mughal school of painting.

Islam had reached India long before the Mughals arrived there. Arab armies invaded Sind in the eighth century, but Muslim rule was not secure until after the successful incursion of the Ghūrids from Afghanistan, late in the twelfth century. The Ghūrids and their successors (some Turkish, some Afghan) ruled the Delhi Sultanate until power was wrested by the Mughals. Other sultanates also predated the Mughals—those of Bengal, Kashmir, Gujarat, Jaunpur, Malwa, Khāndesh, and the Bahmanid state of the Deccan, which broke up into five provincial dynasties just before the Mughal dynasty was founded. Most of these rulers, like the Mughals, were Sunni Muslims; notable exceptions were in the Deccan. Although in these cases the ruling class was Muslim, the population remained largely Hindu.

What the Mughals achieved in India, which their Muslim predecessors had not, was a truly centralized government authority with a strong administration and the bureaucracy to support it—and the military might to sustain and even enlarge it. This was not accomplished by Bābur or Humāyūn but by the emperor Akbar, son of Humāyūn, who ascended the throne in 1556 at the age of fourteen. It took him some time to establish himself and overcome court intrigues that challenged his authority and abilities, but every threat was met successfully. He was an inspiring leader, fierce and able in combat, and by 1576 he had, by conquest, added Gujarat and



Fig. 1. *Akbar Hunting with Cheetahs*. Opaque watercolor and gold on paper. From an *Akbarnāma* (The Book of Akbar) manuscript. Mughal, ca. 1590. Victoria and Albert Museum, London (IS. 2-1896, f. 24)

Bengal to the small realm won by Bābur and lost and regained by Humāyūn. Through a series of brilliant alliances—including his marriage to a daughter of the raja of Amber (now Jaipur)—he secured the loyalty of the Rajput chiefs (except the

rana of Mewar). Now it was no exaggeration to call the Mughal domains an empire, for Akbar's rule extended over all of northern India, as far south as the edge of the Deccan plateau. Akbar's administrative system was based on the one put in place

by the Afghan Shīr Shāh—Humāyūn's nemesis—and it involved an official aristocracy that ran the government and pledged troops in return for payments in cash or the revenues from land grants (which reverted to the Crown upon the death of the fief holder).

Akbar (fig. 1) was a truly remarkable individual. He was an admired (and feared) leader and a courageous warrior. Though he could not read (it is thought that he was dyslexic), he had a keen intellect and he was particularly open-minded and tolerant of religious diversity, much to the dismay of the orthodox mullahs. Akbar was a Sunni himself, but his policy was to find common ground among various beliefs; he led religious discussions involving Islam, Hinduism, Zoroastrianism, Judaism, and Christianity, and even developed a syncretistic religion that incorporated what he felt were the best features of each, but few at his court responded.

The essential features of Mughal art were established under the active patronage of Akbar. These features include a love of and respect for the natural world, an interest in the historical record, an insistence on workmanship of the highest standard and, perhaps most important, a synthesis of Iranian, European, and Indian traditions. Architectural monuments from his reign, all in red sandstone, include the walls of Agra Fort and the so-called Palace of Jahāngīr there (his other buildings in the fort were demolished to make room for marble structures erected by Shāh Jahān), as well as the palace complex at Fatehpur Sikri, the capital city not far from Agra. This extraordinary monument, occupied only from 1571 until 1585 and now seemingly frozen in time, was built in tribute to the birth of a male heir.

Akbar's artistic legacy is perhaps best seen in illustrated manuscripts. These include the monumental *Hamzanāma* of about 1562–77, consisting originally of 1,400 paintings on cotton, each 2½ by 2 feet with text on the reverse, recounting the adventures of Amīr Ḥamza, an uncle of the Prophet. In the 1580s and 1590s, the period of greatest religious ecumenism, the Hindu epics were translated and illustrated copies produced. During the 1590s, when the capital was at Lahore, the royal atelier completed a number of sumptuously illustrated literary works, as well as illustrated versions of the history of Akbar's reign and the autobiography of Bābur, his grandfather. There are comparatively few objects that can be associated with Akbar's reign (but see cat. nos. 1–5, 7).

The origins of pile-woven carpets in the Indian subcontinent are obscure. No surviving carpet can plausibly be dated earlier than the late sixteenth century. Several authorities have credited the Mughals, and Akbar in particular, with establishing the industry,¹ but literary references show that woolen carpets were manufactured and in use in pre-Akbari India. The earliest texts containing relevant references are Buddhist works from northern India dating to about 500 B.C.–A.D. 100.² Some of the words that translate as “carpet” are problematic in terms of the weaving technique involved: some seem to refer to flat-woven (tapestry-weave) pieces involving a very different technique that will not be discussed in this study, but other terms probably refer to pile-woven types. Carpets were observed in use in Daulatabad, Delhi, and Multan in the fourteenth century,³ in Delhi again in 1517,⁴ and in Gaur in Bengal in 1536,⁵ but it is not clear whether they had been imported or produced locally. Carpets adorned a platform in the so-called Mystic House in Agra, where Humāyūn's accession was commemorated in 1532, but these were identified as Persian.⁶

In 985 the Arab historian Makdisī equated the woolen carpets of Sind with those of Khorāsān in eastern Iran.⁷ Later references to carpet production and even to trade concentrate on the kingdom of Gujarat. Between about 1458 and 1472 the Gujarati sultan Maḥmūd Bīqara presented to the sultan of Kashmir a gift of *kateba*, from the Arabic *al-katifa*, usually meaning a pile-woven carpet.⁸ Such gifts were typically made locally, but Gujarat was such a nexus of international trade that the sultan conceivably would have had easy access to imported goods of higher quality. One of the key centers of commerce in Gujarat was Diu, a small island at the tip of the Kathiawar Peninsula on the west coast of the Gulf of Cambay. According to the Portuguese trader Duarte Barbosa, by about 1518 various Indian goods, including large carpets, textiles, and spices, were brought to Diu for transshipment to diverse countries around the Arabian Sea.⁹ Another hub of mercantile activity was the Gujarati port town of Cambay, cited as a place full of foreigners and merchants by Ibn-Baṭṭūṭa in the fourteenth century¹⁰ and again by Barbosa almost two hundred years later. Barbosa also mentioned, among other textiles, the thick carpets woven there.¹¹ One wonders if the carpet looms of Gujarat—and they surely constituted no more than a minor industry—operated under royal auspices or subsidization, or if, more likely, they were purely commercial enterprises.



Reference to a flourishing carpet-weaving industry in India was first made during the rule of the great Mughal emperor Akbar by his biographer, Abū'l Fazl. Although the weaving of pile carpets did not begin in India with Akbar, it was his great contribution to establish the art of carpet weaving firmly within the context of court workshops, perhaps following the Persian model. It is to Akbar's reign that the earliest surviving Indian carpets can be attributed. Akbar's involvement with the arts was intense. This interest derived not only from the leisure made possible by his success as a military leader and administrator but also from the nature of his personality and intellectual curiosity. He was an accomplished musician and craftsman, and he demanded excellence from the artists and artisans who worked for him.

The official account of Akbar's reign was given by Abū'l Fazl, a close adviser and friend, in a work called the *Akbarnāma* (The Book of Akbar). The first two volumes of the chronicle record the events of the reign (down to the year of Abū'l Fazl's death, 1602), but the third volume, named the *A'in-i Akbari* (The Institutes of Akbar), records in detail the organizational structure and administrative policies and regulations related to governing the vast kingdom. This remarkable work, compiled about 1590, is a combination gazetteer, almanac, manual for kingship, and annotated organizational chart. Along with a few other sources, it provides special insight into Akbar's artistic interests and the organization of his workshops.

At his magnificent royal complex at Fatehpur Sikri, the capital from 1571 to 1585, Akbar established a *kitābkhāna*, an atelier for book production. Although he could not read,¹² Akbar was a great patron of the arts of bookmaking. Hindu and Muslim painters, calligraphers, illuminators, papermakers, and binders worked side by side to produce volumes for Akbar's royal library. A series of imperial workshops employed craftsmen who turned out the luxury items—furnishings, perfumes, clothes, tents, weapons—requisite for royal life.¹³ The workshops and storerooms were part of the vast royal household, an administrative unit encompassing "one hundred offices and workshops each resembling a city, or rather a little kingdom."¹⁴ At least some of the workshops were situated near the emperor's palace, including "studios and work-rooms for the finer and more reputable arts, such as painting, goldsmith work, tapestry-making, carpet and curtain-making, and the manufacture of arms."¹⁵

Carpets were part of the court furnishings and, artistically, were not viewed in the same way as, for example, illustrated books. They were stored with other household goods and not in the treasury or royal library, where especially prized possessions were kept. Akbar's fascination with the various crafts of his workshops led him to participate actively in their production. He understood the value of direct experience and expressed his conviction in this way: "Although knowledge in itself is regarded as the summit of perfection, yet unless displayed in action it bears not the impress of worth; indeed, it may be considered worse than ignorance."¹⁶ In 1580 Akbar was observed by the Jesuit missionary Antonio Monserrate "making ribbons like a lace-maker, and filing, sawing, and working very hard."¹⁷ One can almost picture the emperor sitting before a vertical carpet loom, tying knots according to the instructions of the master weaver.

Workmen such as carpet weavers, at least those employed in commercial workshops, lived in virtual slavery, at the service of nobles and officials, with a small wage in return;¹⁸ presumably those employed in the service of the emperor fared somewhat better.

The private storehouse for the most prized textiles was known as the *farrāshkhāna* (carpet house), and Akbar demonstrated a particular interest in it:

His Majesty considers this department [of the royal household] as an excellent dwelling-place, a shelter from heat and cold, a protector against the rain, as the ornament of royalty. He looks upon its efficiency as one of the insignia of a ruler, and therefore considers the care bestowed upon it as a part of Divine worship. The department has been much improved, both in the quality and quantity of the stores, and also by the introduction of new fashions.¹⁹

The storeroom was devastated by fire in 1579. A record of the damaged contents gives an indication of the quantity and variety of material housed there:

Approximately one crore [10,000,000 pieces] of awnings (*shamiyana*), tents (*kargah* and *khayama*) and screens (*saraparda*) made from gold cloth, European velvet, woolen cloth, Damask silk, satin and brocade, brocaded carpets and European velvets, gold cloth and embroidery of an amount beyond description were all burnt and lost.²⁰

Only brocaded carpets (that is, carpets with supplementary wefts woven in during the weaving process on the loom) are listed, and it is not clear whether or not they were pile-woven. It is possible that pile carpets were stored elsewhere or were not among the damaged goods, but it may also be that pile carpets were not woven there until after 1579 (all references postdate the fire).

The section of the *A'in-i Akbari* that deals with the *farrāshkhāna*, in which various portable encampment structures are fully described, closes with a brief section on carpets that merits careful attention:

His Majesty has caused carpets to be made of wonderful varieties and charming texture; he has appointed experienced workmen, who have produced many masterpieces. The *gilims* [kilims] of Iran and Turan are no more thought of, although merchants still import carpets from Goshkan, Khuzistan, Kirman, and Sabzwar. All kinds of carpet weavers have settled here, and drive a flourishing trade. These are found in every town, especially in Agra, Fathpur and Lahor. In the imperial workshops single *gilims* are made 20 *gaz* 7 *tassujes* long, and 6 *gaz* 11½ *tassujes* broad [approximately 55 feet 6 inches by 17 feet 9 inches], at a cost of 1810 rupees, which those who are skilled in the business have valued at 2715 rupees. *Takya-namads*, or woollen coverlets, are brought from Kabul and Persia, but are also made in this country. It would take up too much time to describe the *jājams*, *shatrinjīs*, *baluchīs*, and the fine mats which look as if woven of silk.²¹

Several important bits of information can be gleaned from this often-quoted passage. First, imperial workshops existed for the manufacture of carpets. Fatehpur has already been cited in this regard; its workshops, perhaps even the royal ones, continued to function even after it ceased to be the capital in 1585. But Abū'l Fazl refers to workshops in the plural, and it is implied though not specifically stated that there were also workshops in Agra and Lahore, two other capital cities. Second, carpet weaving flourished because of an influx of weavers, probably mainly from Iran, as in the case of textile weavers, and possibly also from Central Asia; because of the emperor's appointment of experienced workmen; and, implicitly, because Akbar ordered carpets to be made, perhaps of particular types.

An analogous situation seems to have occurred with regard to the Wardrobe, the household department responsible for garments and garment fabrics:

Skilful masters and workmen have settled in this country to teach people an improved system of manufacture. The imperial workshops, the towns of Lahor, Agra, Fathpur, Ahmadabad, Gujrat, turn out many masterpieces of workmanship; and the figures and patterns, knots, and variety of fashions which now prevail, astonish experienced travellers.²²

Abū'l Fazl also states that although "the imperial workshops furnish all those stuffs which are made in other countries," foreign (Iranian, European, Mongolian) articles of wear were still abundant, no doubt because of Akbar's fascination with the exotic.²³

The reader of the translated passage about the *farrāshkhāna* might think that Abū'l Fazl is making a distinction between pile-weave and flat-weave carpets, but only the word *gilim* is used in the original text.²⁴ Although the word *gilim* (in one form or another) refers to flat-weave carpets in Iran and Turkey, in Mughal Farsi it has a more generic meaning, merely as a carpet or rug.²⁵ If *gilim* were intended here as a flat-weave rug, flat weaves (*jājams* and *shatrinjīs*) would not be addressed as a separate topic in the last sentence. The comment that the carpets of Iran and Turan (Turkish-speaking Central Asia) are no more thought of is simply an expression of pride in local accomplishments (and flattery of the ruler), but Abū'l Fazl admits that Persian carpets were still being imported.

There are few other references to carpet weaving during Akbar's time. Agra, already noted by Abū'l Fazl as a weaving center, was cited as the point of departure for a shipment of carpets that went by river to Bengal in 1584, but these may not have been of local manufacture.²⁶ The Deccan, the great south-central plateau of India that extends to the coast east of Hyderabad, is mentioned just once: in about 1680 an English mission to the eastern Deccan found Persian-style carpets being woven in Ellore (modern Eluru, still a carpet-weaving town) by a family of weavers descended from Iranian weavers who were said to have settled there a hundred years earlier.²⁷

With the death of Akbar in 1605, the son whose birth had resulted in the construction of the palace complex at Fatehpur Sikri ascended the throne.





Prince Salīm became Jahāngīr (fig. 2), the “world-taker,” and he ruled until 1627. He inherited a well-ordered, sensibly administered empire and he had the good sense to avoid drastic change. His reign was essentially peaceful, and Jahāngīr was thus able to indulge in pleasurable pursuits. He was sensitive and enlightened but more erratic as ruler and patron than his father. His mind was often clouded by alcohol or narcotics, but Jahāngīr fortunately had a powerful wife, Nūr Jahān, who capably managed the governance of the empire. Jahāngīr exhibited a special gift for personal insight and an empathy for natural history. His autobiography, the *Tuzuk-i Jahāngīrī*, amply displays his sensitivities and interests, for example, his fascination with the habits of *sāras* cranes.

Jahāngīr was a collector and connoisseur, and he took special pleasure in the art of painting. While still a prince and governor of Allahabad, he had his own painting workshop. Paintings from his atelier tend to be more naturalistic than those from Akbar’s, and some of the most perceptive Mughal portraits of people, flora, or fauna were executed at his behest. He took pride in recognizing the hand of a specific painter, even in minute passages. Paintings of the subjects that fascinated him were gathered into albums, which formed a kind of microcosmic view of Jahāngīr’s life. He collected unusual animals, birds, and objects, and depictions of them were sometimes added to the albums. Not especially known as a builder, Jahāngīr nonetheless left his mark by instituting construction in white marble instead of sandstone and by favoring elaborate intarsia decoration in both marble and sandstone structures. These are features of his tomb of Akbar in Sikandra and the tomb of I‘timād al-Daula in Agra.

Alas, there is no literary work equivalent to the *A‘īn-i Akbarī* for the reign of Jahāngīr—or for any other Mughal ruler—and there is no documentary evidence of imperial workshops for carpet weaving during his time. However, judging by the technical and artistic sophistication of the carpets attributable to his reign, activity in the imperial workshops must have continued. Under Jahāngīr there was a *farrāshkhāna* within the imperial bureaucracy, just as there had been under Akbar.²⁸

There are numerous references to Indian carpets and weaving centers under Jahāngīr, although none refer to specifically royal workshops. The book of Francis Pelsaert, who was in Agra from 1620 to 1627 as an agent for the Dutch East India Company, is

particularly valuable because it is essentially a commercial report on the commodities produced and traded in India. He noted that carpets were woven to order (fine or coarse) in moderate quantities in Agra and Fatehpur. Carpets were the only local product he found in Agra.²⁹ A specially commissioned carpet was reported to be in the process of manufacture there in 1619.³⁰ Agra was also a commercial center; carpets from Jaunpur, east of Agra, were sold there, and it was a principal outlet for the sale of carpets made in Lahore.³¹

Lahore carpets were clearly held in special regard. They were eagerly sought by the East India Company, and the first shipment of carpets back to England, in 1615, consisted entirely of carpets from Lahore.³² Sir Thomas Roe, the first English ambassador to the Mughal court, speaks of wanting to acquire Persian carpets (probably meaning Persian-style Indian pieces) in Ajmer but finding them unavailable there because they were all spoken for by the emperor; he concludes that he will have to go to Lahore to get them.³³ An agent for the English company reported, hinting at their rarity and appeal: “Carpets to be well chosen would require a long time; those which are true Lahore carpets are not suddenly to be gotten.”³⁴

Cambay, in Gujarat, was noted for carpets made with Persian patterns but not so fine or expensive, and the English agent Downton was instructed in 1614 to look for carpets from Cambay.³⁵ In the 1620s the only local products observed in Ahmadabad were textiles, including carpets woven “with an intermixture of silk and gold thread.”³⁶ Jaunpur was known for its coarse carpets, which were traded by the Portuguese.³⁷ Further east, the weavers of Bengal were said to weave pile carpets of various kinds with great skill.³⁸ Other references to carpets made at this time involve issues of trade and appear in Chapter 2.

Shāh Jahān (fig. 3) ruled for thirty years, from 1628 to 1658. The period saw its share of military campaigns, which had, however, scarcely any effect on the empire as a whole or on daily life. A successful assault was conducted against the nettlesome Portuguese—held in contempt for their idol-worshiping ways—at Hooghly in West Bengal. A campaign was waged by the emperor’s third son, Aurangzeb, to punish the increasingly independent raja of Orchha. The raja was captured and executed, his magnificent palaces in Orchha and Datia were occupied by imperial Mughal forces, and a mosque was erected



Fig. 2. *Emperor Jahangir Weighs Prince Khurram*. Mughal, ca. 1615–25. Opaque watercolor and gold on paper. From a manuscript of the *Tuzuk-i Jahangiri* (The Memoirs of Jahangir). British Museum, London (1948.10-9.069)



Fig. 3. Bichitr. *Shāh Jahān Receives His Three Eldest Sons and Āsaf Khān During His Accession Ceremonies*. Opaque watercolor and gold on paper. From the *Pādshāhnāma* (The Book of Kings) manuscript (f. 50B). Mughal, ca. 1630. The Royal Collection, Windsor Castle. © Her Majesty Queen Elizabeth II

on the site of a temple, built by the raja's father, that had been demolished during the invasion.

The expansion of the empire into the Deccan and Central Asia was Shāh Jahān's primary military concern. The lure of the Deccan lay in its fabled wealth. The process had begun under Akbar, with the capture of Burhanpur in the northern Deccan. Shāh Jahān, through a great show of force, secured a treaty with Bijapur and token submission from Golconda before naming his son Aurangzeb viceroy of the Deccan, but complete subjugation of the territory would not come until Aurangzeb's reign as emperor. Central Asia attracted Shāh Jahān's attention because it was the ancestral homeland of the house of Timur. With instability in Transoxiana, he saw an opportunity to succeed in taking Samarkand where Bābur, founder of the Mughal dynasty, had failed. Shāh Jahān knew Bābur's story well, for he was fond of having passages from his great-great-grandfather's memoirs read to him at night before retiring. To his dismay, the two-year campaign was an unmitigated disaster; many lives were lost, the treasury was depleted as a fortune was expended, and the army never even reached Samarkand.

The early years of Shāh Jahān's rule were marked by increasingly severe Muslim actions and pronouncements, perhaps under the influence of the orthodox Sunni hierarchy at court. Tensions between the ruling Muslim minority and the Hindu majority were inevitable. Most inflammatory, because of its effect on the general population, was the order to destroy recently built Hindu temples and the prohibition of new building. Such repressive measures were tempered later in Shāh Jahān's life, and he became known as an active patron of Hindu music and literature. He even chastised the orthodox Aurangzeb for his anti-Hindu stance. The softening of his formerly severe attitudes may have been due to the influence of his eldest son, Dārā Shikūh, a cultural aesthete and religious eclectic who was later denied the throne by his more ambitious and ruthless brother.

In several ways the defining event in Shāh Jahān's reign was the death of his beloved wife, Mumtāz Maḥal, in 1631 as she was giving birth to their fourteenth child. She had been his confidante and adviser on all state affairs, and his sense of loss was so profound that he remained in mourning for two years. Her death may have influenced his spirituality, and it provided him the reason to erect the building for which he is justly famous, the tomb

of Mumtāz Maḥal, known as the Taj Mahal. The costly edifice took years to build: construction began in 1632 and was completed, apart from secondary buildings, by 1648. Only by 1643 had enough work been done to allow the annual memorial service for Mumtāz Maḥal to be held there. Rich materials were used without restraint, and the Englishman Peter Mundy was duly impressed, even in the first year of construction: "Gold and silver esteemed common metall, and Marble but as ordinary stone."⁹ From his private apartments in Agra Fort, Shāh Jahān could watch the slow progress of the lofty dome and corner minarets on the site downriver.

In artistic terms Shāh Jahān is thought of primarily as a builder. Apart from the Taj Mahal, he embarked on major projects in the forts of the three imperial capitals, Lahore, Delhi, and Agra. In Lahore and Agra, he built marble palaces after razing existing buildings within the fort walls. In Delhi, which became his official capital in 1648, he built his own fort between the river and the new city he founded (known today as Old Delhi; the New Delhi of today was designed by Sir Edward Lutyens in 1912). His buildings are characterized by the copious use of white marble and of *pietra dura* inlays of contrasting color.

Shāh Jahān loved stones and collected jewels avidly. Shortly after his accession, he commissioned the fabulous Peacock Throne, so named for the two jeweled birds adorning its canopy. The throne took seven years to complete, and finally, in 1635, it graced the Hall of Public Audience in Agra. When the imperial capital was moved to Delhi in 1648, the throne was sent there and continued in use during the reigns of Aurangzeb and his successors, until it was seized by the invader Nāder Shāh. It was then taken to Iran, where it was eventually dismantled.

The royal book atelier was active under Shāh Jahān's patronage, and several albums were assembled from new and existing paintings and calligraphies, Indian and Persian, for imperial pleasure. Among the works associated with Shāh Jahān are the Kevorkian Album, the Wantage Album, and the Minto Album.⁴⁰ One volume of the history of Shāh Jahān's reign was copied and illustrated, the *Pādshāhnāma* (The Book of Kings) now in the collection of the Royal Library at Windsor Castle. The paintings of the *Pādshāhnāma* are, in their exact and rather detached portrayal of historical events, superbly executed reminders of Shāh Jahān's preference for recording rather than interpretation or analysis.



Historical references to carpet weaving in the time of Shāh Jahān are few, perhaps because texts at this time, like paintings, show more concern with recording than with description. Most important is a letter written at Lahore in 1640 by Islam Khan, the vizier of the Mughal Empire, to the grand vizier of the Ottoman Empire, explaining that a messenger had been dispatched by Shāh Jahān to convey certain oral messages to the new sultan, Ibrahim. About the mission he says:

Arslan Agha is being sent by one of the royal ships (*jahazat-i Padshahi*). He has been given a box (*buqqa*) of 'atr-i Jahangiri, a specialty of this country, and two prayer-carpets of rare quality made in the *karkhana-i Padshahi* at Lahore and Kashmir, so that he may present these to the Sultan on his own behalf (*az janib-i khwud*).⁴¹

We thus know that there were imperial carpet workshops at Lahore—something implied by Abū'l Fazl about forty years earlier—and at Kashmir.

Kashmir has not been otherwise mentioned as a center for carpet production, and it would be the first noncapital city, to our knowledge, to have a workshop. The fact that the unusually observant Jahāngīr, who had much to say about the weaving of fine shawls in Kashmir,⁴² did not make any mention of woven carpets suggests that an imperial workshop might have been established there between 1620, the year of his visit, and 1640, the date of the letter. The Āsār Maḥal, a shrine for relics of the Prophet in Bijapur, contains carpets—some now also in the Archaeological Museum in Bijapur—that were said to have come from Kashmir in 1657,⁴³ but the reliability of this reference is suspect. It has yet to be verified and, furthermore, many of the Āsār Maḥal carpets are Persian in origin.⁴⁴

There are several references to nonimperial carpet factories within Mughal dominions. One concerns Amber, ancestral residence of the Kachhwāha clan and original home of a vast collection of carpets, some dispersed, some still belonging to the maharaja of Jaipur. Amber Palace is said to have had a factory for carpets of silk and wool prior to 1640.⁴⁵ The history of Shāh Jahān's reign refers to a prayer carpet made to order in a carpet factory of Multan, in the Punjab, as a donation to the mosque at Medina.⁴⁶ Woolen carpets were still being made at Fatehpur, and carpets of gold and silver and silk were manufactured in Gujarat, specifically in Surat and Ahmadabad.⁴⁷ It is uncertain

whether the latter were actually pile carpets or a type of brocaded cloth. If carpets, they may have resembled the so-called Polonaise carpets of Iran (a type once mistakenly thought to be Polish, hence the name), whose silk pile contrasted with brocaded areas of gold and silver.

Extremely valuable documentation of carpet weaving, mainly during Shāh Jahān's reign, survives in the form of inventory records for many of the carpets now or formerly in the collection of the maharaja of Jaipur (hereafter referred to, for convenience, as the Jaipur Collection). These carpets were kept at and presumably acquired for Amber Fort, and they remained there until their transfer to Jaipur in 1875 and later. Records survive in the form of labels on some of the carpets and in an inventory register that repeats some of the label information. The register lists some 266 carpets.

In 1905 Colonel T. H. Hendley published a large volume that includes illustrations of some of the Jaipur carpets. Hendley repeats two contradictory legends concerning the formation of the collection: that the carpets had been brought by Raja Man Singh from Kabul as spoils of war from Herāt in the early seventeenth century, and that the carpets had been presented by Shāh Jahān to the Jaipur raja in exchange for ground on which he would build the Taj Mahal.⁴⁸ These legends may be dismissed on two counts. First, each explanation is too early for the evidence of the inventories, and, second, the large number of carpets of unusual shape suggests they must have been commissioned for use in specific spaces.

In 1929 A. J. D. Campbell of the Victoria and Albert Museum, London, was invited to Jaipur to prepare a report on the maharaja's carpets, primarily for conservation purposes. Campbell's unpublished report lists 212 carpets, with measurements and descriptions of design and structure, as well as label and register information.⁴⁹ A full set of photographs was taken. A second report on the Jaipur Collection was prepared by May Beattie in 1972, but it too was never published. Her report lacks the text planned for the final report, but it attempts a classification of the Jaipur carpets based on structure, color, and design.⁵⁰ Most recently, a full translation of the inventory labels and register has been done by Dr. Chandramani Singh and Dr. Gopal Narain Bahura.⁵¹

The carpets in several Indian museums were originally in the Jaipur Collection and can be matched with Campbell's entries. Carpets in the Maharaja Sawai Man Singh II Museum, Jaipur



Fig. 4. *Aurangzeb and His Third Son, Sultān Ā'zam, with Courtiers*. Mughal, ca. 1660. Opaque watercolor and gold on paper. Private collection

(hereafter referred to as the City Palace Museum) were donated by the present maharaja's father, and the rugs belonging to the Government Central Museum of Jaipur were also part of the maharaja's collection. The Calico Museum of Textiles in Ahmadabad and a museum in Varanasi, the Bharat Kala Bhavan, possess Jaipur pieces too, but most came from the secondary storage and were thus not part of the maharaja's own collection and do not appear in the Campbell report. A number of carpets in Western collections are also from the Jaipur holdings, acquired both before and after the Campbell report was prepared.

The Jaipur inventory records must be used with some care. A few labels contain information that is contradicted elsewhere. For example, Campbell #1 was acquired in 1656, whereas its pair, Campbell #2, was purchased in 1701. The earlier date can be

accepted here, because a number of similar pieces were also acquired in the 1650s. Several labels do not belong to the carpets to which they were attached. Two of the large Indo-Persian carpets are described as *velāyatī*, or foreign (here meaning Persian), but others are not. One unquestionably Indian piece is called foreign, suggesting a switch in labels. But on the whole, the label and register information seems reliable and consistent.

Of the 212 carpets described in Campbell's report (and photographs exist for most, thus ensuring correct identification), 64 bore inventory labels. The information is variable, depending also on the condition of the labels, but it may include date of acquisition, date of inventory, place of acquisition, name of vendor, and sometimes even the price. Some carpets were acquired in Aurangzeb's time, but the majority of carpets bearing labels were



acquired during Shāh Jahān's reign. The earliest were bought in 1632, but many were purchased from dealers in Lahore in the 1650s. The two principal types were the flower carpets and the durbar carpets. These are sometimes referred to as "Lahori gelim," or Lahori carpets, but it is unclear whether they were actually manufactured there. Lahore in its heyday must have served as an entrepôt for the north, and the products of Multan and Kashmir may well have been obtained through Lahori sources.

The documentation afforded by the Jaipur material is complemented by a number of other carpets that can be securely dated to Shāh Jahān's reign. The Girdlers' carpet (figs. 11, 62; cat. no. 14) was woven between 1630 and 1632; the Fremlin carpet (fig. 49) was woven about 1640; and a small Lahore rug in Kyoto was acquired in 1650 (see p. 20). The Kinghorne carpet (fig. 65), a European copy of a Lahore rug, was woven either in 1640 or 1618, in Jahāngīr's reign.

Shāh Jahān was succeeded in 1658 not by his eldest son, Dārā Shikūh, but by the more politically astute and ambitious Aurangzeb, who had brutally outmaneuvered his brothers and virtually imprisoned his father, confining him to his private apartment inside Agra Fort. Aurangzeb's initial military campaigns focused on the northwest frontier, but he became obsessed with bringing the remaining independent Muslim kingdoms of the Deccan into the Mughal fold. In this he ultimately succeeded, taking Bijapur and Golconda in 1686 and 1687 and subduing the intransigent Marathas, but at the cost of overexpansion. He died in 1707, and the Deccan was independent again less than twenty years later.

Aurangzeb (fig. 4) became increasingly reactionary in his religious views. He continued his predecessors' encouragement of Hindu participation in the administration and the military, but he attempted to undo some of the very reforms that had made Muslim-Hindu relations generally uneventful and even cordial. For example, he revived the *jizya*, the despised poll tax on non-Muslims, which had been judiciously dropped by Akbar. This act caused the Rajput chiefs, on whose support he depended, to be reluctant to fight for him.

Aurangzeb was not the patron of the arts his father, grandfather, or great-grandfather had been. Royal artists were active in the early part of his reign, producing sensitive paintings, but soon his overzealous reforms resulted in the closing of the

painting ateliers and the suppression of music and poetry at court. Patronage continued at the princely level, albeit on a less lavish scale. Natural forms in decoration, so sensitively and lovingly captured in the ornament of earlier times, became increasingly stylized and unnatural in their patterning.

References to carpet weaving during Aurangzeb's time are few, and they fail to suggest any royal involvement in the production, not surprising given the ruler's austerity and rejection of artistic and other pleasures. If there had been a royal carpet workshop anywhere, one would expect it to have been in the fort at Delhi, the capital, but there was none. The absence of workshops in Delhi, royal or not, was attributed to lack of encouragement, not lack of talent.⁵² The physician Manucci wrote of carpets "plain and flowered" that were made at Lahore.⁵³ It is doubtful that the looms were still weaving under imperial direction, especially since several visitors commented that the city was falling into a state of ruin, implying royal neglect.⁵⁴ Finally, there is the reference to Persian-style carpets woven in the Deccan about 1680, previously cited with respect to Akbar's time because of weavers said to descend from Iranians who settled there a hundred years earlier.⁵⁵ One gets the sense from these limited references that carpet weaving was no longer carried out with imperial support or direction but had been marginalized to the provincial northern and southern edges of the empire.

Aurangzeb was the last Mughal emperor to wield real authority. He was succeeded by a long line of weaklings and pleasure lovers. Of the fifteen rulers who governed the empire over the next one hundred years, the longest continuous reign was that of Muḥammad Shāh (r. 1719–48), famous for hosting the Persian invader Nāder Shāh's occupation of Delhi and looting of the Mughal treasury in 1738–39. Throughout the century dissident groups in the provinces, as well as European trading companies, the British most of all, gained power as the central authority lost it. The Mughal era officially ended in 1858, when the last emperor was deposed, but in reality the Mughal rulers were no more than British puppets by the turn of the nineteenth century. Artistic patronage during the eighteenth century came from local courts. Carpet production followed the pattern set under Aurangzeb: key production centers were the north and the Deccan, and manufacture was stimulated by both local and foreign demand.

International Commerce

Less than half of the five hundred or so known surviving Indian carpets are in India today, in various collections but particularly in the possession of the maharaja of Jaipur. The vast majority of first-rate examples, based on quality or condition, are now in the West and a few are in Japan. Some are known to have left India in this century: the rectangular flower carpet (see fig. 93; cat. no. 22) acquired by the Metropolitan Museum in 1970 from the Kevorkian sale at Sotheby's, for example, was still in Jaipur in 1929 when A. J. D. Campbell prepared his report for the maharaja. The shaped flower rug now in Cincinnati (fig. 101; cat. no. 25) was not in Jaipur at the time of Campbell's visit, but it was there in 1905 when Colonel T. H. Hendley published his important folio volume on the maharaja's carpet collection; the Cincinnati carpet was singled out with over twenty plates.¹ It is impossible to know when many of the Indian carpets in Western collections left India because information about provenance is so often lacking. For example, Benjamin Altman, a great benefactor of the Metropolitan, gave to the Museum, by bequest in 1913, all seven of its fine-weave Indian pieces, the rarest type of all, and a few others, but nothing is known about their source.

Certainly some of the carpets in Western and Japanese collections reached their ultimate destinations as a result of the commercial activities of the English, Portuguese, and Dutch during the seventeenth and eighteenth centuries. All three, beginning chronologically with the Portuguese, sought to profit from the newly established maritime trade with East Africa, the Persian Gulf, India, the East Indies, and China and Japan. The sea route from Europe to the East around the Cape of Good Hope, first navigated in 1497–98 by the Portuguese Vasco da Gama, afforded the European powers the possibility of trade free from the costly taxation imposed on goods shipped via the overland route through the Middle East.

It was the English who first expressed interest in the potential of Indian carpets as trade goods. The English East India Company was created in 1600, under a charter from Queen Elizabeth I, to establish trade by sea with Asia as the Portuguese had already done. It was a private entity led by a board of directors, and its purpose was to earn a profit for its shareholders. Several early voyages by company vessels to India were essentially exploratory in nature, and the English merchants predictably found strong resistance to their presence in India among the Portuguese (and, in the East Indies, among the Dutch). In Surat, the English established a trading center, or warehouse, known as a factory although goods were not manufactured there, and they dispatched agents, or factors, to other cities to obtain commercially viable merchandise. The first mention of carpets in company records appears in a letter dated 1611 in which one agent tells another that he is expecting delivery of their "Turkey carpets,"² apparently as personal rather than company property. Oriental carpets were very much in vogue as status symbols in England, and since most carpets had until then come from Turkey, they were generically called "Turkey carpets," regardless of their actual source.

In 1614 a group of merchants gathered on board a ship anchored at Surat and prepared a list of goods thought suitable for sale in England. Carpets were one of the seven items noted, but only a modest level of investment was proposed; the major investments were to be in indigo from Sarkhej and painted cottons.³ The first consignment of carpets (and they were called Lahore carpets) was shipped from Surat in 1615. The carpets, measuring from 2½ by 1½ yards to 7 by 2½ yards, were sold the following year in London for prices of £2.11 up to £30 each.⁴ The large sizes sold well, and that is what the agents in Surat were told to obtain. Lahore carpets were clearly considered the most desirable, for



they are repeatedly mentioned by name in company correspondence. The next shipment of Lahore carpets also consisted of various sizes, probably because the agents decided to take what they could get of what they considered a scarce commodity.

Repeated efforts to obtain large carpets met with failure, and in a letter three agents in Agra tried to explain the situation to their superiors in December 1619:

Carpetts of such length and breadth as Your Worships desire them we shall hardly ever be able to procure; for of such sizes we find very few ready made, and we perceave, by experience of a few bespoken here, that the tardines, slownes and poverty of the workemen to be such that it is endles labour to bespeake them, and those bespoken to cost dearer than others ready made. Of th' ordinary syzes here made we have sent you of all sorts this yeare, and a good quantety, as hereafter you will perceave; and of other syzes than these you may never expect them, unles we can perswade the woorkemen of themselves to make them broader; which we will endeavour.⁵

Ten days later, another communication, from different agents, provided further elaboration:

Carpetts of Lahore and Agra, yf your Worshipps have had information that quantites maye bee had, beinge bespoken, of those lengths and breadths you have advised for, it is a greate error; for to my knowledge there hath bin a carpett in Agra house this twelve month amakinge, and yett is little more than half don; and they neither make them soe well nor good collors as when they make them without bespeakinge. And therefore yf those carpets and their sizes like you that this yeare are sent, questionlesse you maye have greate quantites of them sent yearlye from one or both places; but Lahore is the cheife place for that comoditie.⁶

This quandary doomed the company's carpet trade in India to failure: the large sizes desired at home were unavailable except by special order (to be-speak), which involved long delays and a lowering of quality standards, since weavers took shortcuts when the sale was guaranteed. Company agents came to realize that Persian carpets brought better prices in London, and there was even demand for them in India. Interest in Indian carpets thus

waned. A list of goods to be purchased at various factories during the coming year, prepared in 1621 by a group of company officials and agents, did not include any carpets at all. Lahore goods—indigo, calicoes, musk, civet—are specifically mentioned as easily available at Agra, since the short-lived factory at Lahore had been closed to reduce expenses.⁷ Indian carpets were referred to (in terms of the company account) only twice more in company correspondence, in 1622 and again in 1625 (thirty Lahore carpets).⁸ By 1626 shipments of all carpets from Surat were forbidden because they were not considered economically viable.⁹

There was a resumption of trade in carpets between 1660 and 1686, the result of renewed demand in Europe. English correspondence is mute on the subject, but Dutch sources reveal that in 1683 the English ordered at least fifteen hundred carpets in India.¹⁰ It is not specified whether these were Indian or Persian carpets (in fact either could be obtained in and shipped from India), but they were probably Persian, for in 1686 the London directors notified Surat that no more Persian carpets were to be sent because they were already falling from fashion.

The number of Indian carpets imported to England was not limited to the few shipments consigned by the company: there was simultaneously a very active private trade being conducted by agents in all kinds of goods, as souvenirs and for personal profit. This was a matter of concern to company officials, for the private trade posed a competitive threat to company profits, and they tried, without success, to forbid the practice. Agents were simply paid too little to give up the opportunity to make a quiet profit on the side. Flagrant offenders were punished, but the practice continued. Company correspondence is filled with references to private trade, and it is not difficult to imagine carpets being concealed among other goods for shipment to England. Near the end of his term of service in India, Sir Thomas Roe, the English ambassador, was asked by the emperor Jahāngīr what he would like as a present to take back to England. Persian carpets, said Roe, probably meaning Persian style.¹¹ Roe, feeling some sympathy for the underpaid agents, had taken a moderate position in the private-trade arguments, and he did in fact take home a carpet, one he had commissioned in India, bearing his coat of arms.¹² Private trade in carpets was legalized in 1631, probably because the company, having by then given up the trade, no longer feared the competition offered by its own employees.



Fig. 5. Abraham van der Hecken. *A Philosopher in His Studio*. Dutch, ca. 1650. Oil on canvas. Collection Dr. Salomon Lilian, Amsterdam

Roe's carpet has long since disappeared but two other commissioned pieces survive. Like Roe's, both carpets incorporate coats of arms in the design. The Girdlers' carpet (figs. 11, 62; cat. no. 14) was ordered from Lahore in 1630 by Robert Bell for a livery company of girdlers in London; it was delivered and presented as a gift to the company in 1634.¹³ The transaction was possible because Bell, a past master

of the Girdlers' Company, was also an official of the East India Company. The Fremlin carpet (fig. 49) must have been commissioned by William Fremlin, President of the Council at Surat, in the early 1640s, since he retired from the company and returned to England in 1644.¹⁴ The Girdlers' carpet is well documented and would be recognized even without the identifying coats of arms and panels of initials. But



Fig. 6. Jacob Ochtervelt. *The Dancing Dog*. Dutch, ca. 1671–73. Oil on canvas. Nationalmuseum, SKM, Stockholm (N 658)

the Fremlin carpet can be linked to the Fremlin family, and logically to William Fremlin, only because of the coat of arms, for no documentation exists.

Why were these carpets specially ordered when the problems of commissioning pieces were well known to company officials? Because requests for special features, most obviously the coats of arms,

necessitated weaving to order following drawings provided in advance. There was also the matter of function. In the Middle East, carpets were traditionally used as floor coverings and occasionally, in India, as wall hangings or tent screens. In Europe they were rarely used as floor coverings until later in the seventeenth century; materials such as rush were



woven for that purpose.¹⁵ The practice in Europe, as depicted in paintings and described in inventories, was to use Oriental carpets as covers for tables and chests. This could affect the size and even the design of a commissioned piece. The Girdlers' carpet was woven to cover the main table in Girdlers' Hall, a function it fulfilled from delivery in 1634 until sometime early in this century, when concerns about its preservation led to relocation in a permanent case. The intended use may have determined its size and even its proportions: the main border seems unusually wide in relation to the field, perhaps because it would be viewed hanging from the edges of the table. That the Fremlin carpet was also meant to cover a table is clear from the orientation of the coats of arms in the border; they are oriented to be seen correctly when the borders are hanging down on all sides. Generally, patterns and colors were unaffected by tastes prevalent in foreign markets; coats of arms were merely superimposed on otherwise conventional designs. Although it is clear that commissioned carpets could have distinctive features, it cannot be claimed that export goods represented a separate category.

Several country houses in England have classical Indian carpets among their furnishings, and it is possible that the oldest were acquired in the seventeenth century when the East India Company was engaged in shipping carpets from India to England. The great Morgan pictorial carpet (fig. 33; cat. no. 4) in the Metropolitan Museum formerly belonged to the Sackville-West family, and it was depicted in a late-nineteenth-century painting¹⁶ as a floor covering in use at Knole, their fifteenth-century house, which contained many early furnishings. Today, Knole still has a few Indian rugs, but they are from a somewhat later period than the Morgan carpet. A pair of large carpets at Ham House in Richmond, England, may be the ones referred to in a 1677 inventory.¹⁷ The blue-ground carpet with scrolling vines and animals (figs. 45, 46; cat. no. 8) formerly belonged to the earls of Ilchester, and the red-ground carpet of the same type (fig. 48; cat. no. 10) in the National Gallery, Washington, D.C., was once in the collection of the duke of Rutland at Belvoir Castle. A carpet commemorating a marriage in the Kinghorne family in either 1618 or 1640 (fig. 65) is a European copy of an Indian carpet that surely came to Europe through trade.

The Portuguese were already well established in the Indian Ocean trade by the time English

and Dutch ships arrived in the last decade of the sixteenth century, and they resisted the threat to their monopoly with military might. The Portuguese trade was an official activity of empire and crown, unlike the private English and Dutch trade. Portuguese fortunes suffered during the first half of the seventeenth century as a result of naval defeats, efficient competition, and loss of support by the Mughals. By the 1640s the Portuguese trading network was so weak that Indian carpets obtained by the Jesuit fathers in Agra were shipped to the viceroy in Goa by the English East India Company.¹⁸ The Portuguese are known to have exported Jaunpur carpets.¹⁹ Otherwise, commerce may be inferred from the existence in Portugal of seventeenth-century Indian rugs. Half a dozen examples belong to the Museu Nacional de Machado de Castro in Coimbra and three more to the Museu Nacional de Arte Antiga in Lisbon, collected at some point from local churches to which they had been donated. One wonders if some of these rugs were not among the group sent from Agra to Goa.

The Dutch East India Company (or V. O. C., for *Vereenigde Oost-Indische Compagnie*) was formed in 1602 from the merger of several trading companies. Like the English company, it was privately held and profit oriented. During the period from about 1620 to 1650, the V. O. C. achieved dominance over the rival Portuguese and English companies. Records of the Dutch East India Company have yet to be carefully scrutinized, and they are likely to provide a more complete view of the Dutch carpet trade than we now have. Nevertheless, certain facts are known. The Dutch started to ship carpets from India in about 1625. The year before, the governors of the V. O. C. ordered from the factory in Surat (both the English and Dutch had factories there) several hundred Persian carpets to be used as table covers. And, in case Indian carpets were found to be of better quality and cheaper than Persian ones, they also wanted five hundred Indian carpets or at least one hundred, as samples.²⁰ A magnificently preserved carpet in the Tokugawa Art Museum, Nagoya (figs. 52, 53), probably came to the Japanese Tokugawa emperor about this time. It is not known whether this carpet was a gift or a purchase, or whether it came on an English, Portuguese, or Dutch ship; the English closed their Japanese factory in 1623, the Portuguese were expelled in 1638, and, from 1640 on, the Dutch were the only Europeans allowed to trade in Japan, from their factory on an island at Nagasaki.



One incident involving the Dutch is especially interesting to us. A Persian carpet was being taken by a company ship to Japan as a gift for the emperor. The ship was lost in a wreck, but a replacement was obtained in India in 1650 and presented to the emperor.²¹ It is tempting to associate this event with the carpet still in the former imperial family's collection, but that carpet seems somewhat earlier and it was surely brand-new when acquired (it still seems virtually new today). Another possibility is a smaller piece in the Gion Matsuri Kanko-boko Preservation Association in Kyoto, said in association records to have been acquired in 1650;²² the emperor of Japan may well have donated this and other carpets to the Kyoto associations.

As late as 1683, when the English were said to have ordered fifteen hundred carpets, the Dutch requested seven hundred and fifty, although all or some of these may have been Persian. This is the extent of our knowledge of the Dutch carpet trade so far gleaned from records, but there is one additional source of information about seventeenth-century trade. Onno Ydema, in a study of depictions of Oriental carpets in Dutch painting, found that there were two periods when the number of representations of recognizably Indian carpets went up

significantly, in the 1630s and from 1660 to 1680.²³ Since these dates correspond roughly to heightened activity in the English carpet trade, they probably also indicate parallel Dutch interest. Of the numerous examples of Dutch painting containing depictions of Indian carpets, two are illustrated here (figs. 5, 6).

The pattern of trade in carpets in the eighteenth century was quite different. English and Portuguese interest seems to have ended altogether, but Dutch trade continued. Representations of Indian carpets continued in eighteenth-century painting, although some of these rugs look like seventeenth-century types. The eighteenth-century Indian carpets in Kyoto, some with inventory dates, surely arrived with the Dutch, since among the Europeans only the Dutch had access to Japan during this period. The eighteenth-century Indian rugs in Kyoto—and several other related pieces in Japanese collections—are attributed here to the Deccan (see p. 146), and Dutch trade from the nearby Coromandel Coast thrived until well into the eighteenth century. In fact, Dutch trade in carpets from the Deccan was recorded as early as 1666, when samples were sent to the Netherlands from the area of Masulipatnam, near the coast.²⁴

Technical Characteristics

Understanding the technical aspects of carpets is now recognized as a crucial part of carpet studies. The nature of the materials used, how they have been prepared, the dyes employed, the characteristics of the weaving structure, the features of side and end finish—all these elements and others combine to yield a kind of fingerprint. It has been well demonstrated over the last generation of carpet research that such technical features are more important than design or pattern in isolating distinctive groups and even in localizing production. A close examination of Indian carpets, then, can not only help us to differentiate Indian carpets from others (a distinction most valued with respect to Persian carpets, since the patterns may be very similar), but it may also allow us to establish distinct groups of carpets and in some cases assign groups to particular production centers. The Girdlers' carpet (figs. 11, 62; cat. no. 14) is of special importance in this regard, for it is the only classical Indian carpet whose source of manufacture, Lahore, is documented beyond question. Based on similarities of technical features, color usage, and design, we may group other carpets with the Girdlers' and conclude that these too may have been woven in Lahore. Since Abū'l Fazl, Akbar's biographer, late in his subject's reign mentions three weaving centers—Fatehpur Sikri, Agra, and Lahore—we may conclude that those early carpets with features unlike the Lahore type were probably manufactured in one of the other two cities.

Material

Cotton and silk were the fibers used in the foundations of classical Indian carpets. For the pile, wool (from sheep, goats, even camels) and silk were the preferred materials. All these fibers were readily available from Indian sources except pashmina, fine goat's hair, which was imported from Central Asia.

Wild or uncultivated silk (tussah) was produced in the provinces of Bengal and Assam, but the silk used in pile carpets was imported from China or northern Iran. According to sources cited in Chapter 1, notes 36, 47, metallic thread was used for brocading some carpets, particularly those woven in Gujarat, but we are unable to produce even a single example of an Indian weaving of this sort. If the works cited resembled the seventeenth-century Persian Polonaise carpets, which featured metallic thread, then we cannot as yet distinguish the Indian pieces from the Persian. It is perhaps more likely that the brocaded Gujarati "carpets" are actually metallic-woven brocade textile, in which case it would be fair to say that, to our knowledge, Indian pile carpets were not decorated with metallic threads at all.

Cotton was the fiber chiefly used for the foundation. The warp typically consists of multiple strands of undyed yarn, usually at least six strands and sometimes as many as twelve. Persian carpets, in contrast, invariably have four-strand warps. The only Indian rugs with four-strand warps are found among the pieces attributed to the Deccan (fig. 132; cat. no. 38), where Persian weavers are said to have settled during the late sixteenth century. Cotton was also used as the weft material, sometimes in its natural state, sometimes dyed a pale red, rust, or apricot color or, in later examples, blue. Many of the carpets that for numerous other reasons can be grouped around the Girdlers' carpet (which has beige cotton wefts, perhaps with a slight pinkish cast in places) have distinctive pink or apricot-colored wefts, so this would seem to be a feature of Lahore carpets manufactured earlier than the Girdlers' of 1630–32. Some later carpets that are not consistently of one type have reddish or rust-colored wefts, but they might not all come from Lahore. These fibers are invariably Z-spun and S-plied, when plied. Cotton was occasionally used in Persian and Turkish carpets as a pile fiber,



Fig. 7. Carpet with pattern of lattice and flowers (detail). Northern India, Kashmir or Lahore, ca. 1650. Pashmina pile on silk foundation, 3'4" x 4'3½" (101.6 x 130.8 cm). The Textile Museum, Washington, D.C. (R63.00.22)



Fig. 8. Chitarman. *Shāh Jahān Nimbed in Glory* (detail). Mughal, dated 1627–28. Opaque watercolor and gold on paper. The Metropolitan Museum of Art, New York; Purchase, Rogers Fund and The Kevorkian Foundation Gift, 1955 (55.121.10.24R)

just for highlights in small areas, but this rarely seems to have been the case in India (however, see p. 133).

Silk was sometimes used as a foundation fiber in India. The fine yet strong strands permitted a much finer weave than could be achieved on a cotton foundation. The finest Indian carpets, those woven with a pile of pashmina wool, have foundations entirely of silk. It is a characteristic of these pieces that the warps and, rarely, even the wefts appear in stripes of different colors (fig. 7). Inconsistency of stripe or band width indicates that the purpose was perhaps not registration or alignment of design but the pleasing aesthetic of the multicolored fringe. This effect can be seen in a few carpets depicted in paintings (fig. 8). A second grade of fairly fine weave, with pile of either pashmina or sheep's wool, typically has a cotton foundation except that the middle weft strand, of each cluster of three that separates rows of knots, is red silk. Silk was apparently not used as a pile fiber in carpets produced in the north but was utilized in the Deccan, mainly in the eighteenth century (see pp. 147ff.).

Wool was the preferred pile fiber, particularly in the north. Sheep's wool was the standard material, and it came in different grades of fineness. Undyed camel's hair has been identified in one carpet (figs. 66–68; cat. nos. 16a–c; see Appendix 1). The origin of this piece has been controversial, but here it is judged to be of early-seventeenth-century Indian manufacture. The camel's hair is one of several unusual features that suggest an experimental stage in the development of carpet weaving (see discussion, p. 77).

The finest Indian carpets of all, really the finest of all classical carpets from any culture, are the pieces made with a pile of pashmina wool, the undercoat of the Himalayan mountain goat (*Capra hircus laniger*). India is the only carpet-weaving society where silk was not the luxury material of preference. Pashmina, from the Persian word for wool, is popularly known in the West as cashmere wool, from the old spelling of Kashmir. Indian weavers were already familiar with pashmina because it was used in fine shawls. Akbar showed interest in the material and is said to have had it dyed; it had

previously been generally used in its natural undyed state.¹ By Jahāngīr's time, those engaged in the manufacture of fine shawls must have fully understood the suitability of pashmina for spinning and accepting dyes and been able to assess its potential as a material for the pile of knotted carpets.

At one time it was thought that Kashmir was the source of this special wool, but this is not so. The fiber is a product of western Tibet. It was sent to Kashmir, however, since the trade in this valuable commodity was controlled by the maharaja of Kashmir. In accordance with the treaty that followed the Tibeto-Ladakhi-Mughal War of about 1681–84, Tibet from that point on sent its entire supply of pashmina to Ladakh, which, following a separate treaty with the Mughals, passed it on to Kashmir.² These treaties probably formalized what had been the practice for some time.

Shawl wool was imported in two grades.³ The finer—and far less plentiful—grade, known locally as *a'sli tūs*, came from wild goats (known as *tūs*; *a'sli* means "true") that shed their fleece in spring against shrubs and rocks, from which it was collected by villagers. The second grade, from domesticated goats, made up the bulk of the material imported. Although Indian weavers may be credited with developing the pashmina carpet into the highest luxury grade of carpet ever woven, they were not the first to use pashmina as a pile fiber. A Persian carpet (see fig. 90 for two fragments) from the Herāt group, dating from the second half of the sixteenth cen-

tury, has a pile of pashmina wool. It would seem that Kashmir shawl wool was also exported to Iran.

There is evidence that shawl weaving in Kashmir may date back to the eleventh century, and Kashmir shawls are mentioned by name in thirteenth- and fourteenth-century sources.⁴ An early reference to a shawl of goat's hair exists in Jain literature,⁵ but that fiber seems to be specifically linked to Kashmir shawls in literary sources only by the time of Akbar. It is certain that Kashmir was, in Akbar's day, the preeminent source for shawls. Secondary status was accorded to Lahore, with over a thousand workshops, so the industry in Kashmir must have been vast. Lahore was known for a kind of shawl made of silk and wool mixed, so the pashmina shawl may have been primarily a Kashmiri product.⁶ Jahāngīr describes the famous shawls of Kashmir as if Tibetan goat's hair were the standard material used there.⁷ One may speculate that Kashmir, with its tradition of manufacturing pashmina shawls, was also the source of pashmina carpets, but some might have been made at Lahore.

Fiber samples from twelve carpets were submitted to Martin Youngberg for microscopic analysis and identification, and the findings are reported in Appendix 1. The results are interesting in several ways. The identification of camel's hair in one piece is surprising because this material has not, to my knowledge, been observed before in a classical carpet. It is no surprise that the finest carpets of those sampled turned out to have pashmina pile. But it is very difficult to distinguish fine sheep's wool from relatively coarse pashmina simply by feel. It is thus useful to know that one carpet has pile of pashmina wool (see Chapter 4, n. 124) despite having a relatively coarse weave (272 knots per inch) and a foundation of cotton and silk. It is evident from this and from actual measurements of the fibers that there is a wide range in thickness within the pashmina fibers, and the finest fiber tends to be found in the carpets of finest weave.

Dyes and Color Usage

Little research has been done on the dyes employed in carpets produced in the eastern part of the Islamic world. A brief article by Mark Whiting in 1978 summarized work done by Anthony Clemson and other students, which was based in part on methods that have now been superseded.⁸ No statistical base for findings has been published. The two contributions found here in Appendix 2 are therefore of



Fig. 9 (cat. no. 10). Detail of fig. 48. Carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1620–30. National Gallery of Art, Washington, D.C., Widener Collection (1942.9.475)



special value. In the first part, Dr. Harald Böhmer presents a useful survey of natural dyes used in the Near and Middle East and India, so there is no need to discuss that information here. The second part consists of recent analyses of dye samples by Dr. Recep Karadağ, Prof. Dr. Nevin Enez, and Dr. Harald Böhmer. For the brief discussion that follows here, further information is drawn from unpublished findings of samples taken from twenty-nine carpets analyzed in 1985 and 1986.⁹ All of the analyses referred to concentrate on reds, but in some cases they examine orange, yellow, and green dyes. Both Persian and Indian carpets were sampled.

The results of the dye analyses should be considered only a second step, after Whiting and Clemson's work, and much more research needs to be done to offer conclusive findings. Nonetheless, a number of interesting points may be raised from the findings at hand. The bluish red quality of the insect dye known as lac and produced in India and South Asia is thought by some to indicate Indian production, as opposed to Persian, but lac was widely traded and appears in many Persian as well as Indian carpets. Its use would not seem to be a valid indicator of origin. The 1985 work is especially interesting in this regard in that it suggests two different types of lac. One type is found chiefly, but not exclusively, in Indian pieces; the other type is found mainly, but not exclusively, in Persian pieces. One Indian carpet, the shaped piece from Cincinnati (fig. 101; cat. no. 25), has red pile dyed with one type of lac but its red silk second weft was dyed with the other type. Could the silk have come, already dyed, from Iran? This work needs to be refined and examined further, but it promises to be a fruitful line of inquiry.

The red dye obtained chiefly from plants of the madder family is associated more with Persian

production by some, but it appears in both Persian and Indian pieces, often in combination with another dye substance. The 1986 results suggest that the combination of lac and madder appears only in Indian carpets, but more pieces should be sampled to bear out this indication. The madder plant of India differs from the Persian variety, but the chemical composition is difficult to distinguish in analysis.

Cochineal was found only in Persian pieces generally attributed to Kāshān and in the blue-ground fragments (figs. 66–68; cat. nos. 16a–c). This might suggest a Persian origin for the latter, but numerous other qualities indicate Indian production (see discussion, p. 76), so perhaps we are dealing in this case with the importation of pre-dyed silk from Iran.

Not much can be concluded at this point from the limited results with yellows, but this is an area that should be pursued. Yellows tend to be locally produced, and the identification of the specific dye source may be very helpful in distinguishing plant groups and localizing production sources. Most yellows were found to be derived from a compound that is found in weld, but the yellow of one silk rug attributable to the Deccan was determined to be not from weld.

Color usage is more an aesthetic matter than a technical one, and it is addressed several times in Chapter 4, in the course of discussing the carpets themselves. It will be sufficient here to note certain key features. Indian carpet weavers approached the level of painters when it came to "applying" color, and they used certain techniques rarely found, or seen far less frequently, outside of India. One may be called "color mixing," for it involves the juxtaposition of knots of different colors, usually in



Fig. 10. Fragment of a carpet with niche-and-flower design. Northern India, Kashmir or Lahore, ca. 1630–40. Pashmina pile on silk foundation, 6" x 2'1½" (15.2 x 64.8 cm). The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.722)

*Technical
Characteristics*

✂

Fig. 11 (cat. no. 14). Detail of fig. 62. Carpet with pattern of scrolling vines and blossoms, known as the Girdlers' carpet. Northern India, Lahore, 1630–32. The Worshipful Company of Girdlers, London



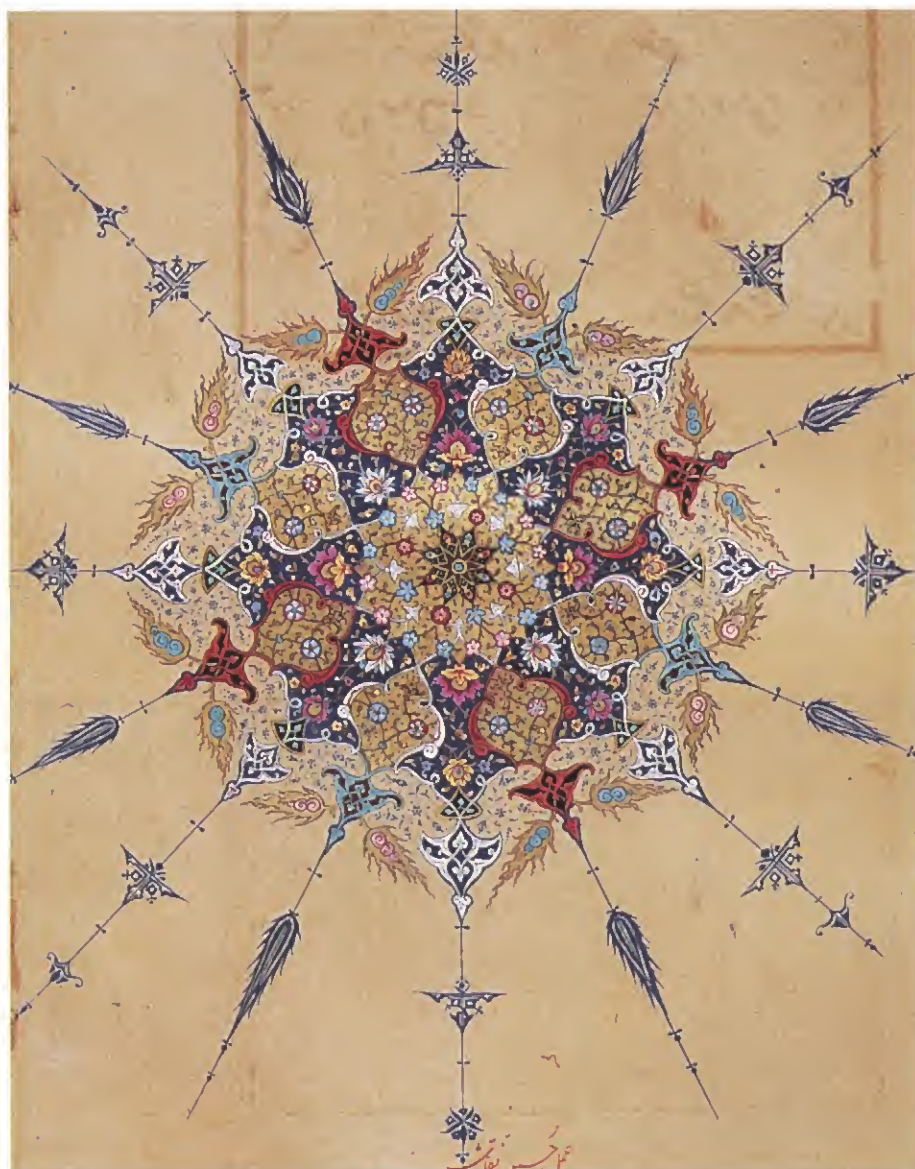


Fig. 12. Husaīn Naqqāsh.
Illuminated roundel.
Opaque watercolor and
gold on paper. From a
Khamsa (Quintet) of
Amīr Khusrau Dihlavī.
Mughal, Lahore, 1597–98.
Walters Art Gallery,
Baltimore (10.624)

checkerboard fashion, to yield a third color. A good example of this may be seen on the bellies of jumping antelopes in the scrolling-vine-and-animal carpet in Washington, D.C. (figs. 9, 48; cat. no. 10), where the color of the upper body is mixed with the white of the belly to create an intermediate hue. Blue and white are mixed in several pieces to indicate water (see fig. 21; cat. no. 1a), a convention seen also in Persian weavings, but its use in more varied ways was developed by Indian craftsmen.

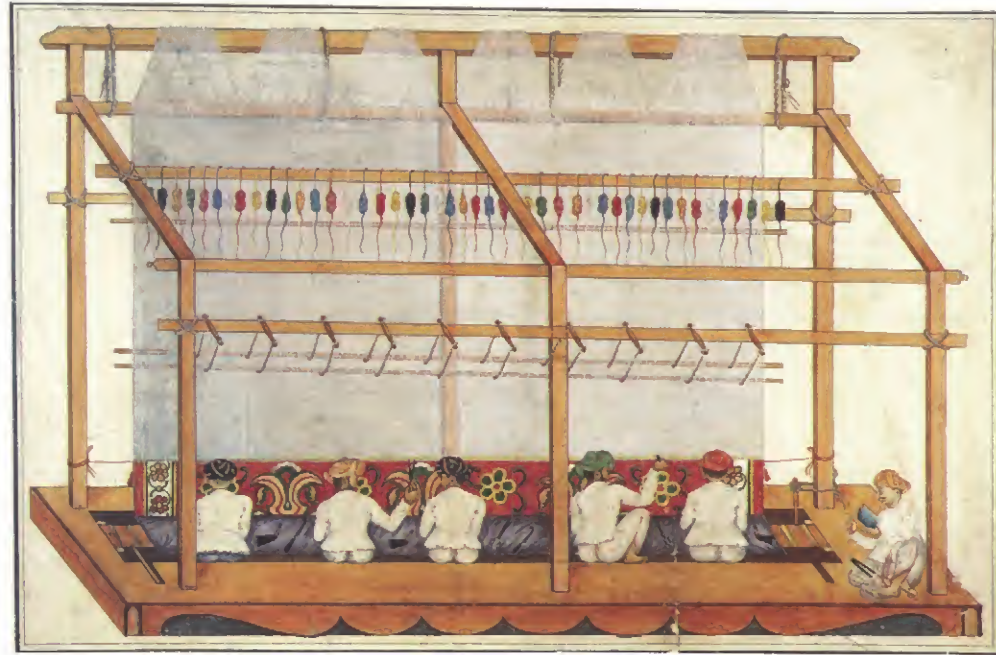
A second coloristic device is shading, where different hues or shades of the same color are juxtaposed, without separating borders or lines, to create the effect of shading. Forms depicted in this manner, for instance, the landscape of a fine pashmina fragment in the Metropolitan Museum (fig. 10), achieve substance and form, almost a sculptural quality. This is closely related to the Indian ten-

dency, first seen in Persian carpets of the Herāt type, to juxtapose colors, sometimes similar ones (the so-called *ton-sur-ton* effect), sometimes not, without outline, a feature evident, for example, in the Girdlers' carpet (figs. 11, 62; cat. no. 14).

Shading was so favored in European art that one is tempted to seek a Western model. Many Akbari manuscript paintings of the 1590s depict landscapes in a northern European style. The images might well be copies of engravings brought in by the Jesuits, but this does not explain the Europeanized use of color, shading, perspective, and even *sfumato*. Tapestries have been proposed as a pictorial source that, when new, would also have provided brilliant color.¹⁰ Despite their seeming unsuitability due to size, tapestries had an appeal in Mughal India; Sir Thomas Roe even recommended (in 1617–18) that pictorial tapestries be presented as gifts to the Mughal court."



Fig. 13. *A Pile-Carpet Loom at Hunsur, South India, Mysore, 1850.* Pen and ink and watercolor on paper. India Office Library and Records, British Library, London (Add. Or. 755)



Western objects such as tapestries, panel paintings, and tinted engravings may have had some influence, but it is evident from examples of Mughal manuscript illumination that a local tradition of shading colors to create the illusion of form and substance had been developed in ornamentation by the 1590s. In the resplendent *shamsa*, or decorative roundel (fig. 12), in the 1597–98 *Khamsa* of Amīr Khusrau Dihlavī, largely in the Walters Art Gallery, Baltimore, the outer edge is defined by flaming cone-shaped leaves in gold, each containing a double or triple whorl in shaded color. Color shading is also seen in the pink and dark red palmettes around the central unit of design. Illumination is the more convincing source of influence because it is essentially concerned with ornament, not representation; additional examples showing the close relationship between the arts of illumination and carpet weaving will be described in the next chapter.

Structure

Carpets in India are a product of palace ateliers or urban workshops and were thus woven on fixed upright looms (fig. 13). Carpet weaving was not a cottage industry, so the looms were set up in quantity in permanent workshops. The carpets of the late sixteenth and the seventeenth century, some of them manufactured at or for the Mughal court or a Rajput court, involve such elaborate patterns and

demonstrate such carefully drawn corners, always a challenge for the weaver, that knot-by-knot cartoons or weaving instructions, known as *ta'lims*, in which colors, sequence, and number of warps are specified for knotting, were surely used. It is possible that certain eighteenth-century rugs, far simpler in pattern, were executed without this graphic assistance.

The warps of Indian carpets are usually on two levels, resulting in a rather corrugated feel in coarser pieces (the backs of the finest pieces seem almost smooth because one is aware only of alternate warps, so depressed are the others). There are invariably three passes or shoots of weft between rows of knots; the first and third run straight, and the second meanders in and out around the warps on two levels (fig. 14). In some carpets, not the finest but a grade or two below, the second weft is silk and the others cotton. The suppleness and strength of the silk allow tighter packing than cotton would permit in the severely meandering second weft. The Persian, or asymmetrical, knot, open to the left, is standard (fig. 15a).¹² *Justi* knotting (15b), a labor-saving technique in which knots are tied over four warps instead of two, appears rarely in Indian carpets, only in early and experimental weavings (see figs. 66–68). It is of some interest that *justi* knotting is virtually a hallmark of the carpets of Khorāsān, in eastern Iran, the original home of weavers who later immigrated to India.

Fineness of weave varies tremendously, ranging from fewer than 50 knots per square inch in coarse

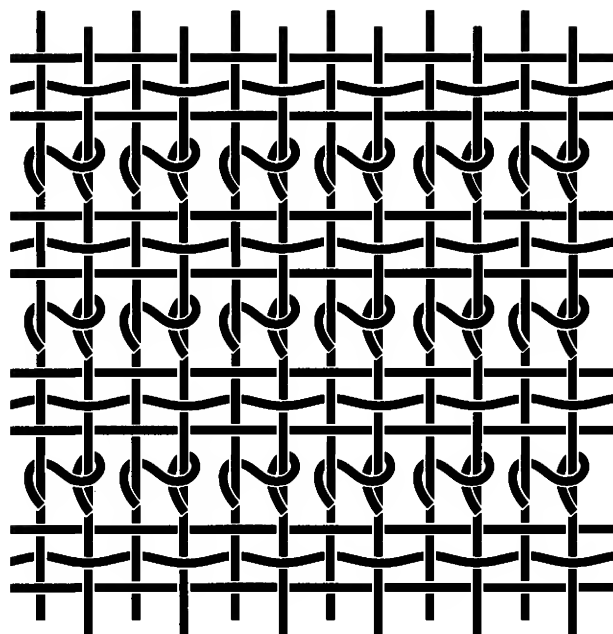


Fig. 14. Typical structure with three weft passes

mats and audience carpets to about 2,100 knots per square inch in the finest pashmina carpet known (fig. 7), an unbelievable achievement matched only in modern times. The length of pile varies considerably and is usually proportional to the fineness of the weave. In other words, the finest pashmina carpets are normally extremely thin and almost velvetlike, no doubt contributing to frequent confusion in earlier literature as to whether they were velvets or pile carpets. Side finish is usually a cable or two of plied warps held in place by wefts and overcast in silk or wool, depending on the pile material. Ends normally involve a plain-weave band and then fringe, sometimes still in loops as it was held in place on the loom and sometimes clustered and knotted.

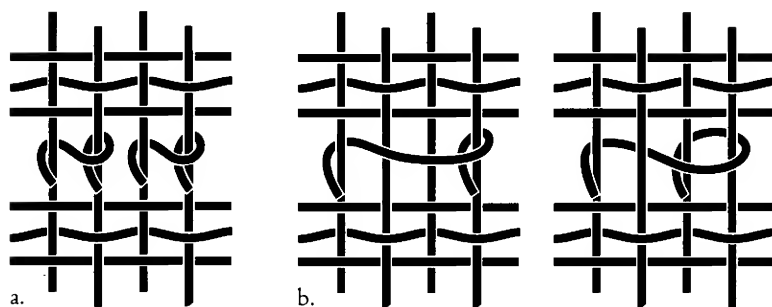


Fig. 15. a: Persian (asymmetrical) knot;
b: *jufti* (paired or "false") knot

4.

The Carpets

The order of the carpets discussed in this chapter has been arranged according to groups best understood in terms of their common or related patterns, technical characteristics, and features of color—a scheme that has the virtue of following a roughly chronological development. The specialist might prefer the establishment of a strict typology based first on technical features, but the general reader will be better served by the more narrative approach adopted here, which still takes significant typological issues into account.

THE PERSIAN STYLE

The first generation of Indian court carpets encompasses those woven under the auspices of the Mughal rulers Akbar (r. 1556–1605) and Jahāngīr (r. 1605–27). Surviving pieces date back to the 1580s. Carpet weaving under royal patronage surely took place at Fatehpur Sikri, then a royal capital, by the early 1580s and possibly even the 1570s, before a major fire destroyed much of the carpet stores there in 1579. Whatever pile carpets were produced during that decade were lost in the conflagration (or perhaps since). So experimental and original are the oldest surviving fragments (figs. 21, 22) that it is difficult to speculate as to what might have preceded them in their country of origin. Given the fact that pile carpets were not specifically cited among the losses from the fire (see p. 7), it is also possible that the carpet workshop was only then established, about 1580, and that these fragments truly reflect the beginnings of court workshop production in India.

Carpets attributed to the reigns of Akbar and Jahāngīr display a variety of patterns that betray a debt to Persian styles currently in vogue. The debt is apparent in all artistic media, literary and visual, which is quite understandable, given the tremen-

dous influx of Persian poets, calligraphers, and painters to the Muslim courts of the Mughals and the Deccani sultans of south-central India and given the appreciation of high Persian culture at these courts. Iranian patronage had waned, and the Muslim courts of India welcomed the artists who offered their talents. The result was that an artistic style based to some extent on Persian models became dominant in India at this time.

The Persian style in carpets can be seen in two forms: pictorial scenes adapted from the book-illustration tradition and patterns comprising networks of scrolling vines and palmettes, sometimes symmetrical and sometimes overlaid with animals or a central medallion. Both forms depended upon the creative output of the book atelier: the first relates to both paintings and illuminated margin scenes, the second, to illuminated openings and panels (and architectural decoration in paintings, which must have been done by illuminators). Both forms involved patterns of sufficient complexity—with curvilinear drawing and figural motifs—that cartoons showing the design and written notations regarding the colors would have been necessary. Apparently, it was the artists of the book atelier who developed the patterns of ornamentation that were then adapted for use in all other media, including architecture, according to the tastes of the ruler and his family. Persian artists who came to India brought their acquired skills, cultural memory, and experience of workshop practice in Iran. It can be no coincidence that at precisely this moment in India pile carpets bearing complex patterns of Persian origin began to be produced in royal workshops.

Only a handful of carpets can be attributed to the reign of Akbar, but they include some of the most inventive and spirited weavings of all. We have seen that carpets were manufactured in pre-Akbari India, but it was Akbar's great inspiration,

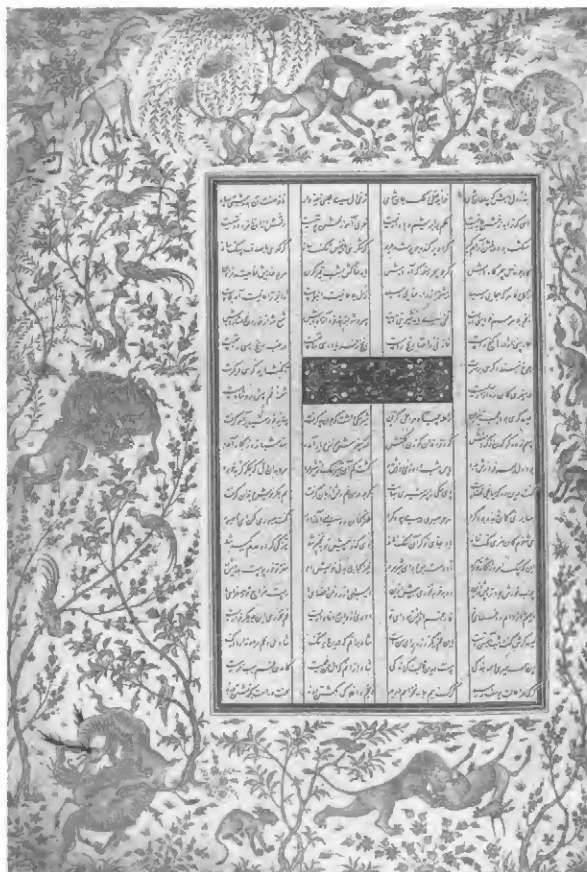


Fig. 16. Folio from a *Khamsa* (Quintet) of Nizami. Iran, Safavid period, ca. 1540. Gold, silver, opaque watercolor, and ink on paper. British Library, London (Or. 2265, f. 20r)

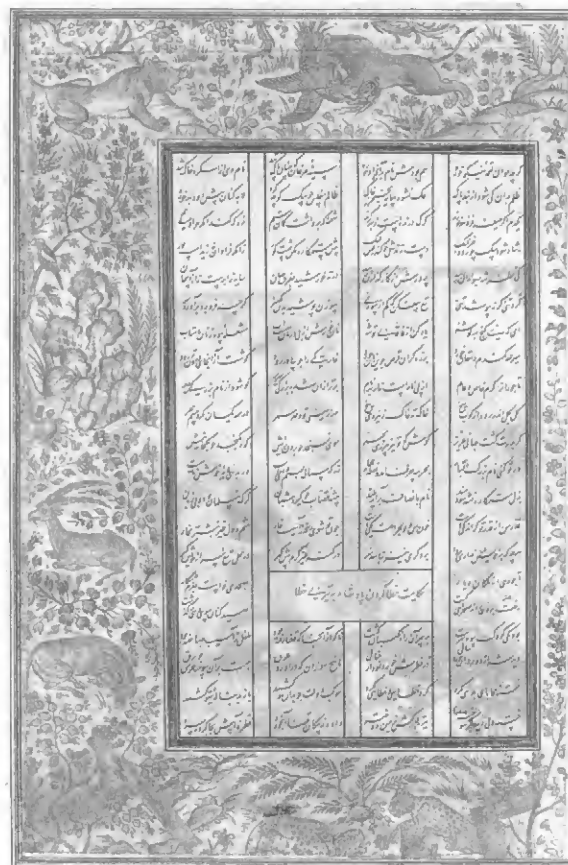


Fig. 17. Folio from a *Khamsa* (Quintet) of Amīr Khusrau Dihlavi. Mughal, Lahore, 1597–98. Gold and ink on paper. The Metropolitan Museum of Art, New York; Gift of Alexander Smith Cochran, 1913 (13.228.26)

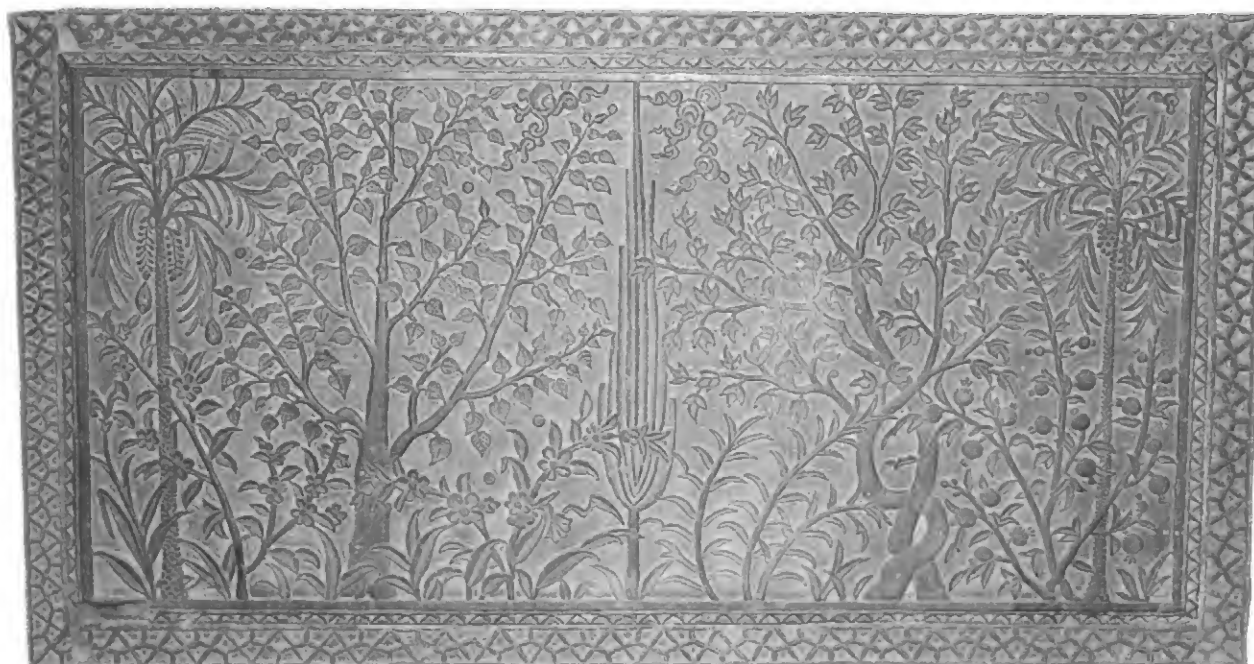


Fig. 18. Carved sandstone wall in the Turkish sultana's house at Fatehpur Sikri. Mughal, 1570s



Fig. 19. Inlaid decoration in the tomb of I'timād al-Daula at Agra. Mughal, 1622–28. White marble and colored stones

perhaps following the Persian model, to bring their production into a court workshop, where designs could be easily conceived by or in collaboration with artists employed in manuscript and even textile design and execution. It is thus logical that the first generation of surviving Indian carpets should reflect such a close connection to those other media.

Persian styles were brought to India by émigré painters, who worked side by side with local artists. Imported Persian manuscripts and furnishings were also available and highly prized. The Persian landscape style, which evolved from fifteenth-century painting and became popular in sixteenth-century Persian manuscript illumination (fig. 16), was adopted wholesale, replete with leaping animals and animal combats, in Akbar-period manuscripts (fig. 17). Similar conventions can be seen in contemporaneous painting such as a scene of Akbar hunting (see fig. 1), with its fleeing animals. An album produced for Jahāngīr between 1599 (when he was still a prince) and 1618 contains numerous leaves with borders featuring similar decorative landscapes, demonstrating the longevity of these conventions. The album also has leaves with margins of vine-scroll patterns. Apart from the occasional inclusion of strictly Indian forms, the principal distinction between Mughal and Safavid versions lies in the Indian artist's preference for more naturalistic, less rigidly conventionalized representation.

A close relationship between textile and carpet design in India is also apparent, not from the

survival of textiles and carpets sharing common patterns but from the appearance in carpets of pattern units that repeat. The drawlooms on which figured textiles were woven required the services of a drawboy who lifted particular warps in a prescribed order (according to a diagram, which had to be worked out in advance) to weave the pattern motifs. The motifs were organized into a pattern unit that was then repeated directly or reversed along a vertical or horizontal axis (or both). Pile carpets are woven on simple looms, not drawlooms, since there is no need for the insertion of pattern wefts. The pattern results from individual knots rather than complex combinations of multiple interlocked warp and weft yarns, so there is no technical reason for a pattern unit. If a repeating pattern is present in a carpet—as it is in a number of pieces with the pictorial or scrolling-vine-and-animal or scrolling-vine-and-blossom patterns discussed below—it is in imitation of textiles whose weaving involved pattern repeats. It thus seems likely that designs for textiles, adapted from ornamental designs conceived in the book atelier and frequently in a Persian style, were sometimes utilized in weaving pile carpets. Repetition of pattern in carpets thus had no impact on labor or time expended but was done to achieve a particular style.

Mughal architecture also shows the influence of the Persian style. Decorative stone panels carved in relief at Fatehpur Sikri, Akbar's magnificent capital (occupied from 1571 to 1585), include ones with



Fig. 20. Fragmentary Herāt carpet with pattern of scrolling vines and blossoms. Iran, last quarter of the 16th century. Wool pile on cotton and silk foundation, 12'6" x 12'9" (381 x 388.6 cm). Cincinnati Art Museum, John J. Emery Fund (1982.117)

Persian landscapes into which Indian forms have been introduced (fig. 18). Akbar's tomb at Sikandra, near Agra, completed by his son and successor, Jahāngīr, contains wall painting with symmetrically disposed vines and palmettes and blossoms, an utterly Persian arrangement of both Persian and Indian motifs. But among the most absolutely Persian architectural decoration on Indian soil is that found in the tomb of I'timād al-Daula, Jahāngīr's chief minister, in Agra. Completed in 1628 and representing the highest level of imperial

patronage, this was the first white marble building in India to be adorned with inlaid stone. Decoration is in patterns of vases, some holding flowers, within niches, and of scrolling vines and blossoms (fig. 19), both essentially Persian designs. Their appearance on the monument was particularly appropriate because of the Persian origins of the man entombed there.

It seems likely that Indian carpets in the Persian style may have been modeled on actual carpets, so close are certain idiosyncrasies of color and design.

Many Indian paintings depict carpets with Persian-style patterns. Often these representations are strictly generic in nature and should not be taken as anything but indicators of general taste. But when the representation is more specific than generic (a situation not always easy to judge), the presence of Indian motifs such as segmented blossoms, wisteria, or grape clusters (see fig. 55) signals an Indian origin for the carpet, but the absence of such motifs or the presence of certain Persian features probably means a Persian carpet is depicted (fig. 3 shows a compartment carpet that may well be Persian in origin). Persian carpets retained their status appeal in India even after local production had reached a high level of proficiency, so there were undoubtedly Persian carpets on hand to be imitated. A significant number of carpets in the Jaipur Collection are Persian in origin.¹

Certain types of Persian carpets influenced Indian weaving. The Herāt class² of the second half of the sixteenth and first quarter of the seventeenth century is important in this regard. The standard field pattern for this class involves a symmetrical arrangement of scrolling vines with carefully placed palmettes and blossoms (fig. 20). A particular rhythm results from palmette pairs turned in, alternating with palmette pairs turned out. Sometimes animals are incorporated into the pattern, superimposed on the vine scrolls. Also influential was the more varied Sanguszko group,³ dating from the late sixteenth or early seventeenth century. Vine scrolls with animals are present in some, including the carpet (see fig. 38) for whom the group is named (Sanguszko is the name of a former owner); other points of reference shall be brought up in due course.

The term “Persian style” should not be construed to imply slavish copies. In most instances it means simply that ornamental models found in Persian art were used as points of departure by Indian artists. The “Indianness” of a carpet will usually be recognizable once certain hallmarks of Indian production have been pointed out.

The Persian style was not abandoned, even when a new, truly Indian style emerged about 1620, late in the emperor Jahāngīr’s reign, and it flourished into the nineteenth century. But the greatest works created in the Persian style are from the first generation of Indian court carpets—made during the time of the emperors Akbar and Jahāngīr, before the Indian flower style became popular—and the second generation, when under Shāh Jahān

(r. 1628–58) carpets in the Persian and flower styles were both produced.

Fantastic-Animal Pattern

Probably the earliest of all surviving Indian carpet types is also the most famous and, in some ways, enigmatic. This is the “grotesque” or fantastic-animal carpet (figs. 21, 22; cat. nos. 1a, 1b), known today in fifteen sizable fragments and a few smaller pieces.⁴ A menagerie of Indian animals and birds is combined with monster masks, vases, and flowering plants in a complex and seemingly indecipherable way. Against a wine red ground, the animals, birds, and masks are depicted issuing from one another’s mouths or foreheads. A close look at the fragments reveals that certain images and configurations are repeated. Several fragments are large enough to show that there are vertical axes about which the pattern turns, sometimes in exact mirror image, sometimes in very altered form. There is such an axis down the middle of the Detroit fragment (fig. 21), indicated by the full-width monster mask that is upside down at the top, but it does not appear as such because the patterns flanking the axis are not symmetrical.

Two recent studies provide convincing analyses of this carpet’s design.⁵ Four rectangular grids, or pattern units, can be isolated (fig. 23), each with a constellation of forms emerging from half of a monster mask. The four grids are combined in rows and repeated vertically in reversed and staggered form, creating an extended alternating point repeat. Figure 24 shows the overall reconstruction of the pattern and the original positions of the dispersed fragments. It is important to reiterate that this kind of pattern repeat is to be expected in drawloom-woven textiles but has no technical justification on a carpet loom, the implication being that it was done solely for aesthetic reasons, perhaps following a textile design. The genesis of this pattern type can be linked to the “in-and-out palmette” designs found in so-called Herāt carpets from late-sixteenth- and early-seventeenth-century Iran, with monster masks substituted for large palmettes and adjacent animal clusters equivalent to the small floral forms surrounding the palmettes (fig. 25). The underlying influence of Persian design is thus practically concealed.

It seems likely that the surviving fragments come from two carpets made from the same cartoon. The designs on some pieces are upside down in relation to others when all are oriented as they were woven





Fig. 21 (cat. no. 1a). Fragment of a carpet with pattern of fantastic animals. Northern India, probably Fatehpur Sikri, ca. 1580–85. The Detroit Institute of Arts, Founders Society Purchase, Edsel B. Ford Fund (31.64)



Fig. 22 (cat. no. 1b). Fragment of a carpet with pattern of fantastic animals. Northern India, probably Fatehpur Sikri, ca. 1580–85. The Textile Museum, Washington, D.C. (R63.00.20A)

on the loom, with the pile facing down. Based on a probable loom width of four pattern units, giving an original width of 10 feet 2 inches or slightly more (field only), a single carpet would have had to be over 65 feet long.⁶ To account for the different pattern orientation among the fragments, a complete reversal of pattern direction about a horizontal center line would have had to occur. Assignment of the fragments to two carpets, woven essentially from the same cartoon but in opposite directions on the loom, is therefore more plausible and also explains a number of design and technical idiosyncrasies of each group of fragments.

Although one fragment retains a trace of guard stripe,⁷ no part of the main border is known to survive. Given the unique nature of the design—at least among carpets—it is difficult to imagine what the border might have looked like. It has been suggested that early efforts to market such fragments as parts of very old carpets, from the fifteenth century, for example, would have been thwarted by the existence of a border immediately recognizable as late-sixteenth- or seventeenth-century work. A late copy⁸ of this design has a bizarre main border

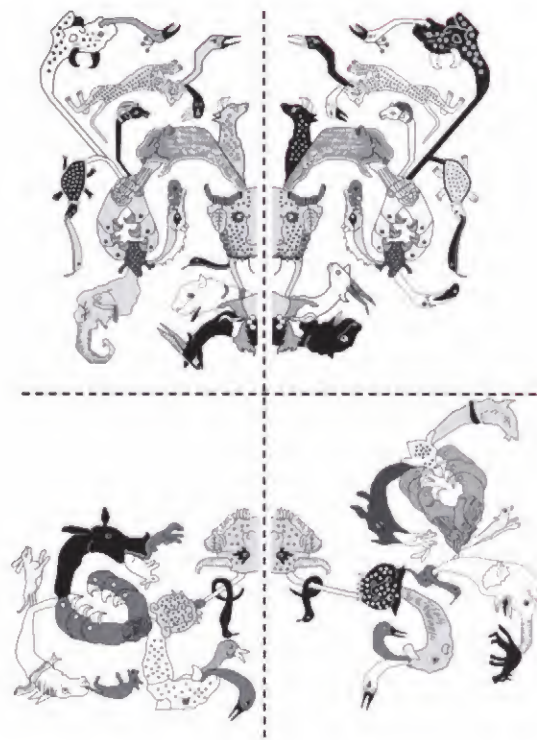


Fig. 23. The four grids or pattern units of the fantastic-animal carpets. From Cohen, "Fearful Symmetry," 1996, fig. 5, p. 108

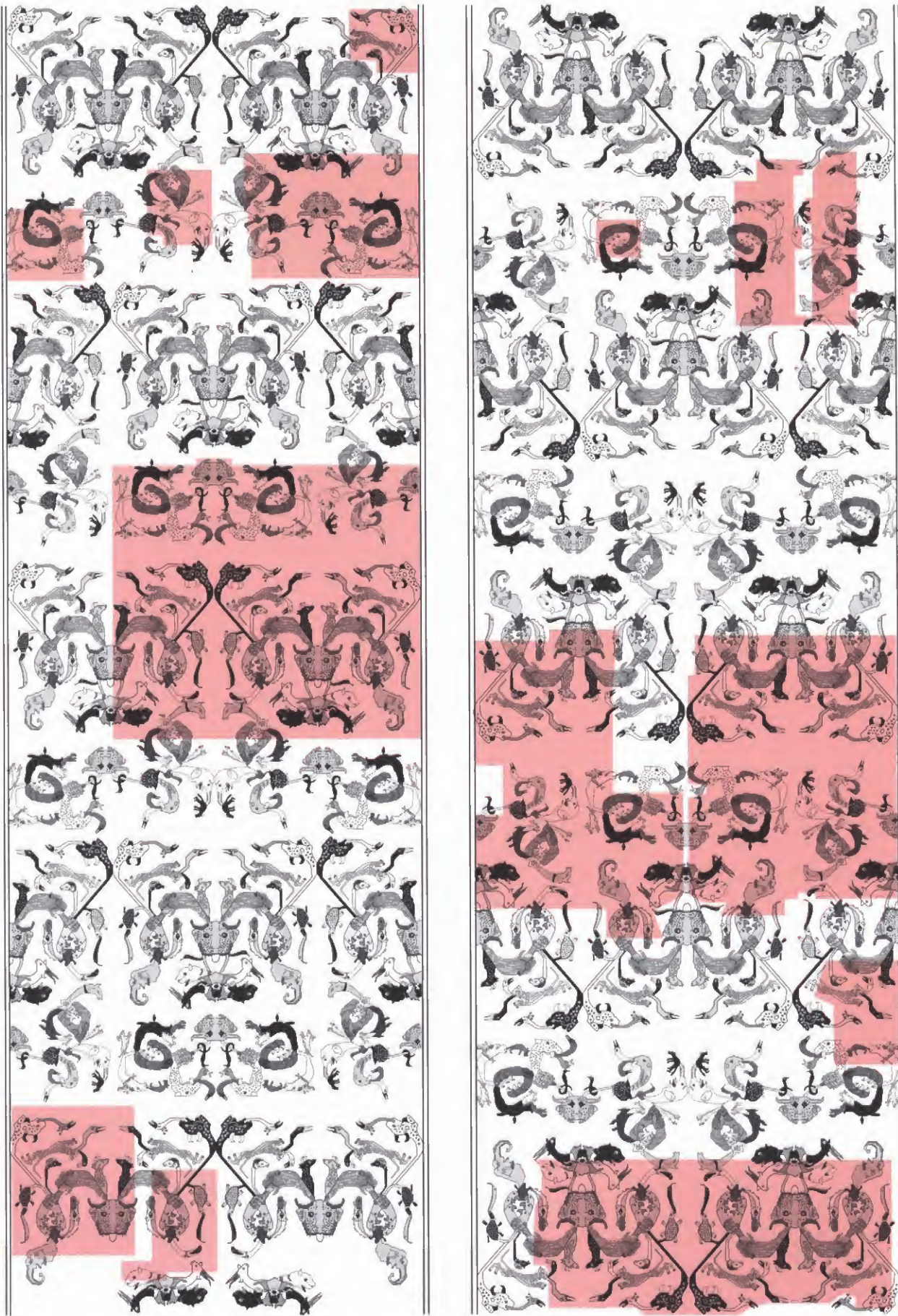


Fig. 24. Schematic reconstruction of a pair of fantastic-animal carpets. From Cohen, "Fearful Symmetry," 1996, fig. 12, p. 117

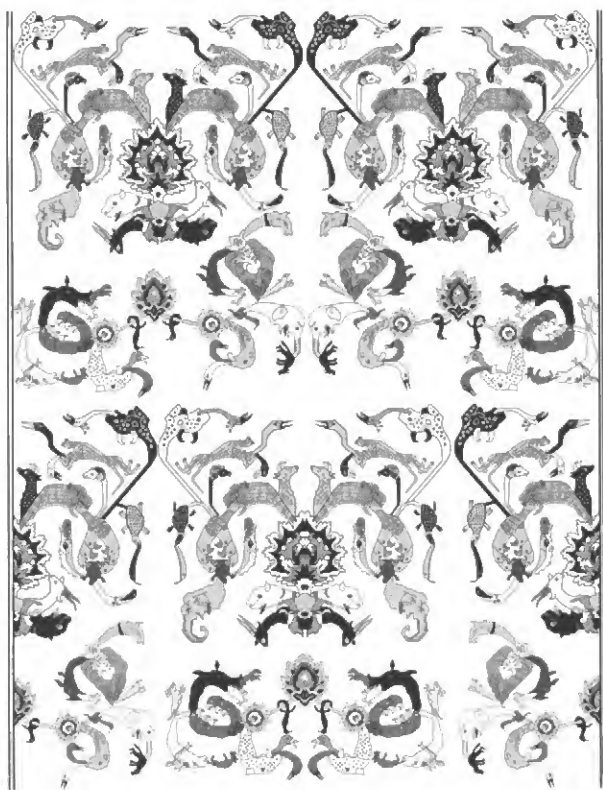


Fig. 25. Section of the pattern of a fantastic-animal carpet, with palmettes substituted for monster and lion masks. From Cohen, "Fearful Symmetry," 1996, fig. 8, p. 110

adorned with what appear to be winged insects, but it is a copy of only one of the fragments, the Detroit piece, not the full design, so the border must be an act of imagination rather than imitation.

This grotesque design is unique among carpets. It has nothing to do with scrolling vines terminating in human, animal, or bird heads where blossoms or leaves might conventionally be found (see fig. 66; cat. no. 16a), although there is a connection in the substitution of an animal for a vegetal or floral form. Steven Cohen relates it to two Indian traditions. One involves an architectural form, the *makara-torana* arch, an evolved form of which featured a scrolling-vine system emerging from the mouths of two *makaras*, fantastic elephant-headed crocodiles that symbolized water. The peak of the arch was interrupted by a grotesque "face of glory," or *kirtimukha*, a monster mask not unlike the Chinese *tao-tieh*. These forms originally had religious significance, but over time they became purely decorative. The point is that images of the *makara* and *kirtimukha* were often combined and depicted grasping something in their mouths (fig. 26).⁹

The second tradition involves the representation of mythical composite animals, most commonly

in paintings and drawings but also in the form of objects such as powder flasks (fig. 27), in which animals sometimes emerge from the jaws of other beasts. The genesis of this tradition, which became popular at the end of the sixteenth century, has been linked to European grotesques of this period. To date, however, no direct counterpart has been identified and no European pattern book has been traced to India.¹⁰

The grotesque carpets are not technically refined; the drawing is rather awkward and in places the knotting (from the back) has a somewhat jumbled irregularity. This may be the sign of a new or young workshop. There is an experimental quality to certain aspects of the use of color, an area in which later Indian carpet weavers excelled. One feature, adopted from Persian practice, is the alternation of blue and white knots to simulate shimmering water represented in the pools at the bases of trees (see fig. 21; cat. no. 1a) and in a dish holding a vase.¹¹ Another feature, evident in both fragments illustrated here, seems to be an Indian innovation, perhaps intended to create an illusion of depth or solid form: one or two stripes of unrelated color are sometimes inserted between the main color of an animal and its dark blue outline. In later carpets several shades of the same color were used, providing in this way a more naturalistic effect.

The energy and fantasy of the design are consistent with Akbar's patronage, which encouraged the amalgamation of elements from diverse artistic and cultural traditions. The spirited animals, however fantastic their behavior, are presented in the seminaturalistic style typical of Akbar's taste. The popularity of this type of grotesque, beginning with the monsters depicted in the *Hamzanāma* dating from about 1562–77 (see p. 5) and continuing through the seventeenth century, reached a peak in the 1580s. Several paintings from manuscripts completed during that decade show column bases and capitals with monster masks, posts with composite-animal designs, or complex designs with masks and projecting animals on thrones (fig. 28) or caparisons for horses.¹² The grotesque carpets were probably manufactured in the 1580s at Fatehpur Sikri before Akbar moved his capital to Lahore in 1585.¹³

Pictorial Designs

The close relationship between carpet design and the art of the book is particularly apparent in a



Fig. 26. Stone makara-torana arch from a temple interior at Badoli, Rajasthan. Pratihara dynasty, 10th century



Fig. 27. Ivory powder flask. Mughal, first half of the 17th century. Staatliche Kunstsammlungen Dresden, Rüstkammer (Armory) (Y381)



Fig. 28. Page from the *Razmnāma* (detail). Fatehpur Sikri, ca. 1582–86. Opaque watercolor and gold on paper. Collection of the maharaja of Jaipur, India. From Thomas Holbein Hendley, *Memorials of the Jeypore Exhibition 1883*. London, 1883, vol. 4, pl. cxxviii.

group of pictorial, or scenic, rugs woven late in the sixteenth or early in the seventeenth century. These masterful weavings, which in general do not seem derivative, are meant to be viewed from one end (or hung vertically). Like the other carpets assigned to Akbar's rule, they rely heavily on figural imagery, both realistic and fantastic.

Two small rugs perfectly represent the pictorial style found in manuscripts of the 1590s from Akbar's atelier. Boston's Museum of Fine Arts owns one of the most famous Mughal rugs of all (see fig. 29; cat. no. 2). It was purchased in 1882 by the donor, Frederick L. Ames, on the advice of William Morris, the English artist and poet, who appreciated its superb condition, color, and pictorial qualities. The field design is a composite of three main scenes. At the top is a palace scene. Two men converse in a pavilion, cooled by the fanning of a servant and entertained by a musician on the roof above. In the open archway of a larger building behind the pavilion, two women attend to a child's needs. Nearby cypress trees and a peacock on the roof contribute to the bucolic spirit. A hunting party moves from right to left across the central zone of the field. A spotted bullock draws a cart holding a tethered cheetah that stands on a striped flat-woven textile; a hunter whisks flies from the face of the feline. A man carrying a slain ibex on his shoulders precedes the cart. In the lower zone, a fantastic beast, a winged elephant-headed lion, clutches seven elephants in his paws, mouth, trunk, and tail as he is attacked by a fantastic bird with streaming tail feathers. The spaces between these vignettes are filled with leaping and recumbent animals and a combat between a lion and a bull.

The palace scene is generic in nature and resembles countless versions depicted in paintings of the 1590s. Variations of the hunt scene are also common in paintings of that era, and one depiction in particular, from a manuscript dating from about 1590, is extremely close, down to the striped textile on which the cheetah stands (see fig. 1).¹⁴ These two passages are typical nonspecific views of court life based on the Persian model. The fantastic creature holding the tiny elephants is a more complicated issue. The composite animal, half lion and half elephant, known as *gaja-simba*, is common in Indian mythology and represents sovereignty and strength.¹⁵ The strength of the creature is such that seven elephants are held in submission. The simurgh, mythological bird of the Persian epic and perhaps here equivalent to the Indian Garuda, sun bird and



Fig. 29 (cat. no. 2). Carpet with pictorial design. Northern India, Lahore, ca. 1590–1600. Museum of Fine Arts, Boston, Gift of Mrs. Frederick L. Ames in the name of Frederick L. Ames (93.1480)

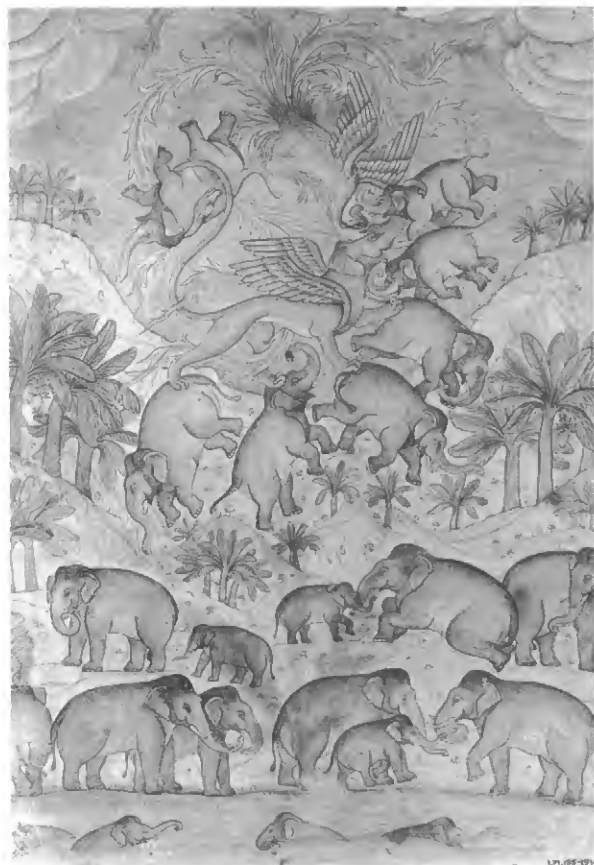


Fig. 30. *Simurgh Attacking a Gaja-simha Clutching Seven Elephants in Its Claws*. Mughal, early 17th century. Opaque watercolor on paper. Victoria and Albert Museum, London (IM. 155-1914)

vehicle of Vishnu, attacks the elephant-lion. Several versions of this group exist, later in date than the rug, in the form of drawings (fig. 30) and the decoration of an inlaid chest.¹⁶ Another drawing shows the simurgh either attacking the back of the elephant-lion or carrying it in its beak as it flies.¹⁷ One earlier Mughal version of the composite animal is seen in inlaid marble and sandstone panels adorning the Delhi Gate of Agra Fort, completed in 1568–69.¹⁸ The simurgh is missing from this composition. The gate to the emperor's capital is of course a perfect spot for a symbol of sovereignty, but the significance of the elephant-lion combined with the simurgh on all later examples remains unexplained.

A second small rug (fig. 31; cat. no. 3), in Vienna, depicts a landscape consisting of different types of flowering or leafy trees and a profusion of birds. The designs of these pictorial elements surely originated in the book atelier; individual passages are seminaturalistic in form and coloring, but they are combined in a totally unnaturalistic way, as a two-dimensional pattern appropriate to the medium. Trees are ordered loosely in rows, and the spaces

between are occupied mainly by large showy birds—peafowl, cranes, and a cock and hen. A subtle spatial play, unnaturalistic but aesthetically effective, is created by the juxtaposition of fully colored trees with flowering plants and smaller trees in pink silhouetted against the wine red ground.

Calling carpets of this class “Persian style” may seem unjustified in the absence of an underlying scroll system that unites the elements, thus providing order within the design, but certain features of the Boston and Vienna rugs suggest familiarity with late-sixteenth-century Persian carpets that are also pictorial in nature (and we know from Abū'l Fazl that they were still being imported). The approach to pictorial design alone indicates a connection. Four small Persian rugs of the silk Kāshān¹⁹ type have directional designs consisting of rows of animal combats, and a carpet of the so-called Sanguszko class in Paris (fig. 32)²⁰ combines various pictorial vignettes, some of them recognizable literary themes, in a loosely ordered manner similar to the Indian pieces. There are analogies in details as well. Monster and animal masks appear in the borders of both Indian pieces, in small silk Kāshāns,²¹ and in Sanguszko carpets (figs. 32, 38). Unlike the masks in the grotesque carpet they do not form part of a larger grotesque pattern but are subordinate to a foliate pattern. Also, the small figures set in the foliage between the main border palmettes in the Indian rugs (birds in the Boston rug, leopards or cheetahs in the Vienna) have counterparts in certain Kāshān and Sanguszko carpets.²²

Enormous carpets were also made with pictorial designs. The largest, at 27 feet 4 inches long, is the Morgan carpet in the Metropolitan Museum (figs. 33, 34; cat. no. 4), once part of the collection at the Sackville-West house, Knole. In this case, a full-width pattern unit appears almost four times to fill the length of the field. The pattern is like that of the Vienna rug, but with real and mythological animals and a palm tree added. The pattern unit is reversed with each repetition, again reminiscent of woven textile design. The uppermost pattern repeat is incomplete, suggesting that the carpet was woven to order and a specific length was prescribed. The border pattern is a geometrized version of the cartouche-and-medallion design employed in a number of sixteenth-century Persian carpets. The design probably originated with artists who worked on manuscripts, since it appears first in illuminations and bindings. A similar arrangement to that seen here appears in Akbari painting as architectural



Fig. 31 (cat. no. 3). Carpet with pictorial design. Northern India, Lahore, ca. 1590–1600. Österreichisches Museum für Angewandte Kunst, Vienna (Or 292)



Fig. 32. Carpet with pictorial design from the Sanguszko group. Iran, late 16th or early 17th century. Wool pile on cotton, wool, and silk foundation, 12' 3³/₈" x 8' 10¹/₄" (375 x 269.9 cm). Musée des Arts Décoratifs, Paris (inv. no. 10615)



Fig. 33 (cat. no. 4). Carpet with pictorial design. Northern India, Lahore, late 16th or early 17th century. The Metropolitan Museum of Art, New York; Gift of J. Pierpont Morgan, 1917 (17.190.858)

Fig. 34 (cat. no. 4). Detail of fig. 33 (*opposite*)





Fig. 35. *Qubād Being Killed While He Sleeps* (detail). Opaque watercolor and gold on cotton. From the *Ḥamzanāma* (The Book of Ḥamza). Mughal, ca. 1562–77. Victoria and Albert Museum, London (IS. 1508-1883)

decoration, an illuminator's domain, which reinforces the notion of close collaboration among workshops.²³ Carpet border and illumination both share decoration in what may be termed the "silhouette style," a bichrome arrangement in which floral motifs appear in one color against the field without an outline or any internal details of a contrasting hue (fig. 35; note especially the carpet

borders). A somewhat similar effect (but in reverse) was achieved in contemporaneous architectural decoration featuring intarsia work of white marble patterns set into red sandstone.

A few other pictorial carpets, either fragmentary or less well preserved than the preceding examples, merit comment. A worn rug in the Textile Museum, Washington, D.C.,²⁴ is long enough, at almost 20 feet, to have repeating pattern units, yet it does not. Meandering streams divide the landscape of the field into three nonmatching units, a device employed by illuminators and binding designers, Persian and Indian alike. The shimmering effect of the stream was achieved by mixing blue and white knots, a feature seen in the grotesque carpets. A narrow and worn strip of field, also in the Textile Museum,²⁵ combines landscape elements divided by a stream with the elephant-lion holding elephants—the same mythological creature seen in the Boston rug. A splendid fragment in the same Washington collection (fig. 36; cat. no. 5) presents a figural image familiar in other media but not otherwise found in carpets, an elephant combat. This sport of kings was described and depicted many times in historical manuscripts, and the image of two animals fighting became a popular one. A similar elephant combat, executed in tile, adorns the exterior wall of Lahore Fort near the main gate, where it reminded those approaching of the power and sovereignty of the king.²⁶

With the exception of the elephant-combat fragment, whose coloring, drawing, and weave characteristics set it apart (and most probably link it to the grotesque carpets), the pictorial carpets form a homogeneous group. The small Boston and Vienna rugs (figs. 29, 31) are much finer than the others but are otherwise similar to the larger pieces. To varying degrees they exhibit a taste for distinctive color, with either contrasting (often black or red on white) or similar colors (often red and pink, light and dark blue, or ocher and ivory or beige) silhouetted without outline or interior definition. In general, these carpets have seven- or eight-strand ivory cotton warps and pale pink or apricot cotton wefts. They may be attributed to Lahore because of technical and, especially, coloristic similarities to the Girdlers' carpet (figs. 11, 62), known to have been made at Lahore, which was established as a royal capital in 1586 and had a carpet factory or workshop.

The pictorial carpets can all be dated to the end of the sixteenth or the beginning of the seventeenth century. Some aspects remind us of conventions or



Fig. 36 (cat. no. 5).
Fragment of a carpet
with pictorial design.
Northern India, Fatehpur
Sikri or Agra, 16th–17th
century. The Textile
Museum, Washington,
D.C. (R63.00.13)

Fig. 37. *Prince with a Falcon*.
Mughal, ca. 1600. Opaque
watercolor and gold on paper.
Los Angeles County Museum
of Art, The Nasli and Alice
Heeramaneck Collection,
Museum Associates Purchase
(M.83.1.4)

designs associated with Fatehpur Sikri, the capital from 1571 to 1585. There is a strikingly close parallel in spirit and design between landscape vignettes in the carpets (fig. 34) and finely carved stone panels decorating a pavilion at Fatehpur (fig. 18). These panels have a similar lace- or weblike effect. The connection between the silhouette style of carpet-border elements and illumination of the *Hamzanāma* of about 1562–77 has already been noted. These styles persisted, however, and a somewhat later date is consistent with Mughal manuscript illumination (see fig. 17) and Persian carpets of that time. From the evidence of painted representations (fig. 37), textiles with similar pictorial patterns of animals leaping amid landscape elements were very much in vogue at this time.

Scrolling-Vine-and-Animal Pattern

The majority of Indian carpets manufactured during the reigns of Akbar and Jahāngīr have patterns based on the scrolling-vine systems of classical Persian carpets; the style even survived the sudden popularity of the new floral style that became the vogue during the reign of Shāh Jahān. Many variations of this type exist in Indian carpets, and they





reflect the comparable variety found in Persian examples. The earliest group of Indian carpets featuring patterns of scrolling vines and palmettes are really still figural in nature, so richly endowed are they with animal forms imposed upon the underlying vine network. They date from the first quarter of the seventeenth century, mainly from the reign of Jahāngīr, and follow the Persian Sanguszko type, woven about 1600, with special emphasis on figural imagery of leaping animals and animal combats (fig. 38), and the Herāt type, with or without animals, whose patterns (fig. 20) place greater emphasis on palmettes than do the Sanguszko pieces.

A fine version of the scrolling-vine-and-animal type woven in India belongs to the Museum für Islamische Kunst, Berlin (figs. 39, 40; cat. no. 6). The most prominent elements of the field pattern set against a white ground are the huge feathery palmettes that anchor the vine system along the central axis and the edges. Contrary to typical Persian practice the field pattern is not symmetrically arranged about a central vertical axis. In fact, the palmettes along this axis are sideways. A different approach has been taken here, one that relates to woven textiles: a single pattern unit, stretching from one central palmette to the next, is shown four times, mirrored each time across the horizontal axes through the central palmettes. The sideways orientation of the pattern units suggests that the carpet was perhaps intended to be viewed from a long side, like carpets furnishing royal audience halls (see figs. 2, 3). Amid the vines and palmettes is found a stock assortment of natural and mythological animals, alone or engaged in combat. There are none of the distinctly Indian types of animals found in earlier carpets. The bright colors on a white ground give the carpet a striking appearance matched in several Sanguszko carpets. The complex multi-colored cloud forms present in the Berlin carpet may also be seen in a Sanguszko carpet (fig. 38). The border has a green band which meanders in reciprocal fashion behind a series of leaf-shaped cartouches. This pattern appears against a red ground decorated with a floral design in pink, an arrangement used in several later carpets.

Fig. 38. Medallion carpet with pattern of scrolling vines and animals, known as the Sanguszko carpet (detail). Iran, late 16th or early 17th century. Wool pile on cotton, wool, and silk foundation, 19' 6" x 10' 6" (594.4 x 320 cm). By permission of the Shinjishumeikai, Shigaraki, Shiga, Japan

An examination of the Berlin carpet provides a valuable introduction to a spectacular piece of this type that survives only in fragments. At least fifteen fragments from border and field are known (there are actually more because several of these fragments are made up of joined pieces).²⁷ Several pieces give a sense of the lively drawing, luminous coloring, and gigantic scale of the original (large field palmettes are 2 feet long), but only the largest fragment (fig. 41; cat. no. 7a) gives an idea of the overall field pattern and proves which border belongs to the field design. Enough remains to determine that there was a repeating pattern unit. The fragment includes more than one pattern unit in length; note that the combat between feline and stag at the bottom of the field is repeated near the top, along with surrounding elements. It shows less than a full width, but fragments with field elements not found in the large piece help us to almost complete the pattern unit (see fig. 42 for a proposed reconstruction). Note that the leaping bull in one fragment (fig. 43; cat. 7b) is partially preserved at the left edge of the large piece, thus permitting correct placement of the curious front-facing tiger and large palmettes above and below. Another fragment (fig. 44, cat. no. 7c), also with original border, fills most of the lower left portion of the pattern unit and was in fact the lower left corner of the entire field.

From the evidence of surviving fragments, the original layout and number of pattern repeats can be established with some authority. There were at least four repeats since the hind legs and tail of a leaping cheetah appear on four separate fragments. The field must have been only one pattern unit wide since more would have required a loom much larger than any used for weaving other Indian carpets of the period. Also, the pattern unit, being laterally asymmetrical, was not meant to be repeated horizontally (it is true that the pattern could have been repeated in mirror reverse, but none of the surviving field fragments show a change in pattern direction). The carpet was thus long and narrow, with a field consisting of a single column of three repeated pattern units and at least enough of a fourth to include the leaping cheetah that appears near the bottom of the pattern unit. This translates into approximate dimensions of 37 feet 4 inches by 10 feet 8 inches. The carpet may have been longer, and it is also possible that it was one of a pair.

The border pattern consists of giant brightly colored palmettes with feathered edges, connected by vines and separated by clusters of blossoms and leaves. There is a close connection to the Berlin carpet in the full-bodied, spiky palmettes seductively



colored with juxtaposed light and dark blue, ocher and yellow, and in the use of a white ground, one in border, the other in field. Several border fragments are in the collection of the maharaja of Jaipur, so the carpet must once have been in Amber Fort, ancestral home of the Jaipur rajahs.

A beautifully designed and well-preserved carpet (figs. 45, 46; cat. no. 8), formerly in the collection of the earls of Ilchester, has a color combination rarely seen—the rich colors of the animals and the floral network of the field appear against a blue ground. Again, this is familiar from the famous Sanguszko carpet (fig. 38). The asymmetrical field pattern consists of a pattern unit shown twice and a bit more, each time reversed from left to right as in the Morgan pictorial carpet in the Metropolitan Museum (fig. 33). A small rug in Japan (fig. 47; cat. no. 9) also has a pattern unit shown twice but without any reversal of direction. The leaping animals and the phoenixes are imposed on a vine network that seems to be only a small part of a much larger system. The border designs of these two carpets, combining masks, rampant animals, and palmettes, are closely related.

Two other scrolling-vine-and-animal carpets exhibit somewhat stiffer drawing but present particularly interesting design variations. The piece in the National Gallery, Washington, D.C. (figs. 9, 48; cat. no. 10), combines the leaping fauna familiar in a Persian context with an assortment of Indian types, including a gaviol, or crocodile, and an elephant ridden by a mahout. A dragon devours a deer, briefly reminding us of the grotesque carpets, and a rhinoceros lumbers across the top of the field. Two camels locked in combat reflect a composition known in several painted versions and two other carpets.²⁸ The cartouche-and-medallion border has white-ground cartouches holding foliate elements and a central mask flanked by two animal heads. The red and pink decoration of the border ground has been seen in the Berlin animal carpet (fig. 39).

The Fremlin carpet (fig. 49) is somewhat clumsy in design and execution, but it offers a pedigree that provides an approximate date of execution. William Fremlin, an official in the East India Company, served in India twice, once in the 1620s and again from 1634 to 1644. He most likely acquired this carpet by special order shortly before his return to England in 1644 (the ban on private



Fig. 39 (cat. no. 6). Carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1610. Museum für Islamische Kunst, Staatliche Museen zu Berlin—Preussischer Kulturbesitz (I. 6/74)

Fig. 40 (cat. no. 6) Detail of fig. 39 (*below*)



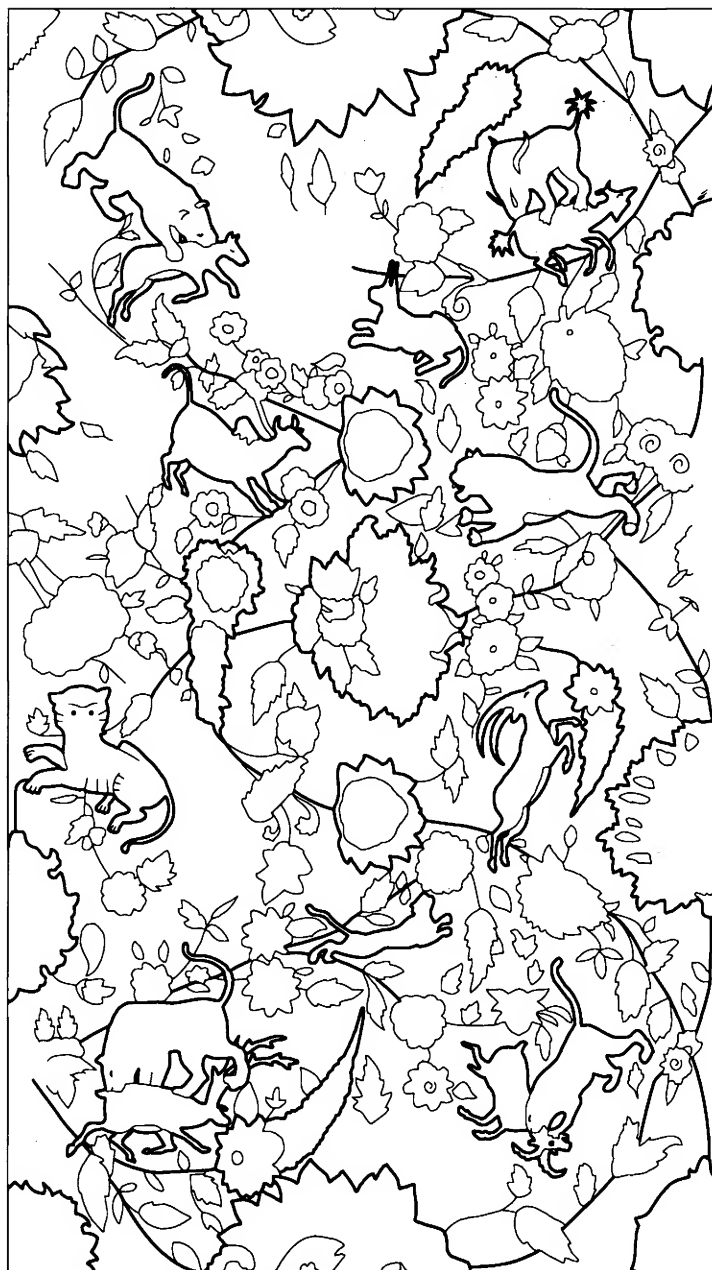


Fig. 42. Schematic reconstruction of a pattern unit of the scrolling-vine-and-animal carpet fragments (figs. 41, 43, 44)

Fig. 41 (cat. no. 7a). Fragments of a carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1600. The Textile Museum, Washington, D.C. (R63.00.2)



Fig. 43 (cat. no. 7b). Fragment of a carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1600. Collection Howard Hodgkin, London



Fig. 44 (cat. no. 7c). Fragment of a carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1600. Collection Howard Hodgkin, London

trade had been lifted in the early 1630s).²⁹ The Fremlin coat of arms, rather sweetly Indianized by the little elephant on top, appears seventeen times in all. The field pattern is the asymmetrical vine network seen in earlier animal carpets, with palmettes placed sideways along the vertical center line. Stiff scrolls are supplemented by flowering trees, and the full-width pattern unit repeats twice and a bit more.

The carpets with patterns of scrolling vines and animals belong essentially to the time of Jahāngīr's rule (1605–27). Artistic taste was expressed in a higher state of finish and refinement, a stronger interest in naturalistic representation and insight into personality, and a somewhat diminished sense of the unrestrained creative energy that was a hallmark of Akbar's workshop products. The animal rugs reflect this trend. The general popularity of the "animal style" during Jahāngīr's time is reflected in the frequency of its appearance in carpet and textile patterns during the first quarter of the seventeenth century. Two volumes of an album made for Jahāngīr include pages dating as early as 1599 and as late as 1618. The margins of many of these leaves are illuminated in the landscape-and-animal style so popular in the 1590s, but there are variations in the vine-scroll pattern, including a leaf dated to 1610–11 whose margins show animals leaping across a carefully arranged pattern of palmettes and scrolling vines (fig. 50).

An approximate chronology for these carpets can be proposed, beginning with the fragmentary carpet with giant palmettes, whose ambitious scale and powerful images encourage association with other objects made in the later years of Akbar's reign (figs. 21, 22). It contains at least one unusual image, the tiger seen in full frontal view, which is otherwise found in a few manuscripts of the 1590s (fig. 51).³⁰ The Berlin carpet comes a little later, perhaps about 1610; its distinctive border design, particularly the feathered or serrated edges, closely matches the border of an album made for Jahāngīr about that year.³¹

At the end of the sequence comes the Fremlin carpet, woven probably about 1640, when the general taste for figural imagery in decorative objects had already lapsed, as it had in Iran. It can only have appeared this late because the specific design was commissioned. Between these extremes fall the other pieces, first the Ilchester and Toyama rugs with their refinement of color and design, then the National Gallery carpet with its full menagerie but stiffer execution.



Fig. 45 (cat. no. 8). Carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1610–20. Private collection

Fig. 46 (cat. no. 8). Detail of fig. 45 (opposite)





Fig. 47 (cat. no. 9). Carpet with pattern of scrolling vines and animals. Northern India, Lahore, ca. 1610–20. The Toyama Memorial Museum, Saitama, Japan (no. 14)



Fig. 48 (cat. no. 10).
 Carpet with pattern of
 scrolling vines and
 animals. Northern India,
 Lahore, ca. 1620–30.
 National Gallery of Art,
 Washington, D.C.,
 Widener Collection
 (1942.9.475)



Fig. 49. Carpet with pattern of scrolling vines and animals, known as the Fremlin carpet. Northern India, Fatehpur Sikri or Agra, ca. 1640. Wool pile on cotton foundation, 19' x 8' (579.1 x 243.8 cm). Victoria and Albert Museum, London (IM. 1-1936)



Fig. 50. Margin illumination (detail). Gold on paper. On a folio from the Jahāngīr Album. Mughal, ca. 1610–11. Náprstek Museum, Prague



Fig. 51. *Akbar Hunting Mountain Lions* (detail). Opaque watercolor and gold on paper. From an *Akbarnāma* (The Book of Akbar) manuscript. Mughal, ca. 1590. The David Collection, Copenhagen (15.1980)

Apart from the Fremlin carpet, which may well come from the same northern production center (Fatehpur Sikri or Agra) as the elephant-combat fragment, the rest of the scrolling-vine-and-animal carpets discussed here may be assigned to Lahore based on similarities to the Girdlers' carpet (figs. 11, 62).

Scrolling-Vine-and-Blossom Pattern

There is one more group of Persian-style carpets to be considered, those having patterns of scrolling vines and blossoms but no figural imagery. These are not merely figureless versions of the Jahāngīr type just discussed; they reflect a more faithful and tighter interpretation of Persian models. They date primarily from the 1620s, but some later examples follow the type closely. The Persian models are later carpets of the Herāt class that include little or no figural imagery and date from the beginning of the seventeenth century and early carpets from the so-called Indo-Persian category,³² the commercial-grade descendants of the Herāt type.

A magnificently preserved carpet in the Tokugawa Art Museum, Nagoya (figs. 52, 53), probably acquired by the Tokugawa emperor of Japan in the seventeenth century via Dutch traders, has a version of this pattern. The design is symmetrical about the central axis

and is not turned on its side, as in the animal rugs, but it again involves a full-width pattern unit that is repeated in mirror image across several horizontal axes. The oversize palmettes and blossoms remind us of the animal fragments with giant palmettes, but the Tokugawa example possesses the refinement and elegance of a later generation. Indian motifs such as segmented and serrated blossoms are interspersed with elements that are Persian in character. The border almost matches that of the carpet with animals and scrolling vines in the National Gallery, Washington, D.C. (fig. 48), and also has a counterpart in a slightly later piece in Hannover.³³

Another giant Morgan carpet in the Metropolitan Museum (figs. 54, 55) involves a relatively small pattern unit. Only half the field width, it is repeated once in mirror image to fill the field width and shown six times, again in mirror reverse, to complete the length. The effect is that of a drop-repeat patterned textile. The border has an elaborate interlocking compartment design based closely on late Herāt examples (fig. 63; see also fig. 20 for an earlier and more complex version).

Several examples have classic Persian medallions superimposed on the repeating floral designs. A large piece in the Museu Calouste Gulbenkian, Lisbon (figs. 56, 57; cat. no. 11), closely matches the Morgan rug in underlying field pattern (and also in the main border) but adds an eye-catching



Fig. 52. Carpet with pattern of scrolling vines and blossoms. Northern India, Lahore, ca. 1620–30. Wool pile on cotton foundation, 23' 4" x 8' 5" (712 x 257 cm). Tokugawa Art Museum, Nagoya, Japan (1-2)

Fig. 53. Detail of fig. 52 (*opposite*)





Fig. 54. Carpet with pattern of scrolling vines and blossoms. Northern India, Lahore, ca. 1620–30. Wool pile on cotton foundation, 30' 3" x 11' 1" (922 x 337.8 cm). The Metropolitan Museum of Art, New York; Gift of J. Pierpont Morgan, 1917. (17.190.857)

Fig. 55. Detail of fig. 54 (*opposite*)





Fig. 56 (cat. no. 11). Medallion carpet. Northern India, Lahore, ca. 1620–30. Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon (T 62).

Fig. 57 (cat. no. 11). Detail of fig. 56 (*opposite*)





Fig. 58 (cat. no. 12). Carpet with pattern of scrolling vines and blossoms. Northern India, Lahore, ca. 1620–30. The Detroit Institute of Arts, Gift of Mr. and Mrs. Edsel B. Ford (29.242)



Fig. 59 (cat. no. 13). Medallion carpet. Northern India, Lahore, ca. 1620–30. Gion Matsuri Tsuki-boko Preservation Association, Kyoto



Fig. 60. View of the Gion Matsuri procession through the streets of Kyoto

lobed medallion whose flaming edges actually pulsate into one minor border. A carpet in Detroit (fig. 58; cat. no. 12) has an unusual arrangement of smaller ogival medallions that do not float on the floral field pattern but are part of its design. A pattern repeat fills slightly less than half the field and includes all of one central medallion and the inner quadrants of the corner devices. It is repeated once in mirror image to complete the field length, and lateral repeats are implied by a brief extension of the design, also in mirror image.

A rug in Kyoto (fig. 59; cat. no. 13) has a central medallion that floats on an unpatterned red field; corner medallions complete the field design, which resembles a Persian or Mughal binding. This splendid piece is one of about thirty classical Persian and Indian rugs that belong to various block associations in Kyoto. Every July these associations stage a procession through the streets of Kyoto.³⁴ The procession is a part of the Gion festival, which has religious origins and dates back to the ninth century. Giant wagons draped with textiles acquired through the centuries by the association are towed

by members (fig. 60). The textiles are generally in good condition because they are kept in storage for the rest of the year. A somewhat cruder version of the rug, acquired in 1632, survives in the collection of the maharaja of Jaipur,³⁵ so a date in the 1620s for the Kyoto piece seems appropriate. The majority of the Indian rugs in Kyoto belong to another group and are discussed on pages 136ff.

The earlier of two surviving circular Indian carpets (fig. 61)³⁶ probably dates from this decade as well. From a central circular medallion radiate sixteen escutcheon-shaped pendants, set off against a white ground otherwise embellished with scrolling vines and blossoms. The brilliant polychrome display against white is reminiscent of the large Berlin carpet with vines and animals (fig. 39) and, in turn, of Sanguszko carpets. In fact, one of the few surviving circular carpets from Iran belongs to the Sanguszko class.³⁷

The Indian carpet owned by the Girdlers' Company of London (figs. 11, 62; cat. no. 14) is important particularly for its fine state of preservation and, most of all, because its history has been fully documented.³⁸ The carpet was commissioned in 1630 in Lahore by Robert Bell, a former master of the company, and delivered in 1634. Bell was a long-standing director of the East India Company, and it was in that capacity that he ordered the carpet for his beloved Girdlers' Company, a livery company chartered in 1449 whose early craft involved the manufacture of leather and brass girdles, or belts, worn outside the tunic or gown and used to suspend the wallet, purse, or side arms. The dominant elements of its design are the various large devices superimposed on the floral field pattern. In the center is the company's coat of arms (inexplicably woven in reverse except for the motto underneath), flanked by a pair of panels bearing Bell's initials and his own coat of arms. Note the incorporation in the company's arms of three gridirons, or girdle irons, a punning allusion to their patron saint, Lawrence, who was literally grilled to death on a girdle iron.

We have seen this type of floral field pattern before; although based on a Persian scheme, it has been handled in a particularly Indian way. The asymmetrical system of scrolling vines and blossoms can be reduced to a pattern unit that fills half the field and in most details is repeated in mirror image in the other half, but with variations in color. The unusual proportion of border to field has already been mentioned with regard to the rug's use as a table cover (p. 19). Spiky, segmented leaves



Fig. 61. Circular medallion carpet. Northern India, ca. 1620–30. Wool pile on cotton foundation, 8'10" x 9'1" (269.2 x 276.9 cm). Government Central Museum of Jaipur, India (no. 2226)

embellish field and border. The presence here of certain colors (ocher, light blue) and color combinations (*ton-sur-ton* ocher with ivory, pink with red), of a particular type of guard stripe, and of certain common characteristics of weave and material enables us to attribute numerous other carpets to Lahore, including most of the pieces discussed in the section on Persian-style carpets. This is essentially corroborated by the remarks of East India Company agents, who singled out Lahore as the source of the best Indian carpets (see pp. 8, 15–17), at least in the 1610s and 1620s.

These Persian-style carpets are not true copies of Persian types. They were inspired by Persian models but in fact possess many features not found in the sources of inspiration. In many Indian pieces, vine networks are not fully realized symmetrical patterns but are off-center portions of larger designs. Repeating pattern units, relatively rare in Persian carpets and closely linked to textile design, are com-

mon. Specific images are purely Indian—the gaval, the *gaja-simha* figure, the frontal lion or tiger, and the elephant combat, among animals; grape clusters and segmented blossoms, sometimes wisteria-like, among floral forms. Silhouetted and *ton-sur-ton* coloring are Indian characteristics and may, together with technical features, be the main way of distinguishing the two groups, especially in the absence of figural imagery.

A comparison of two rugs belonging to the Corcoran Gallery in Washington, D.C., is instructive. A small rug of the Herāt class (fig. 63), probably dating from the first quarter of the seventeenth century, has a nicely symmetrical field pattern of vine scrolls and palmettes, with a clear distinction in size between major and minor elements and a border of interlocking compartments. A small rug of Indian origin (fig. 64; cat. no. 15), specifically Lahore, we can now propose, dates probably from the 1620s or a little later. The field pattern bears a



Fig. 62 (cat. no. 14). Carpet with pattern of scrolling vines and blossoms, known as the Girdlers' carpet. Northern India, Lahore, 1630–32. The Worshipful Company of Girdlers, London

family resemblance to the Herāt, but individual elements are closely packed and not clearly differentiated by size. The design is not vertically symmetrical but involves the vertical repetition of a pattern unit, something we have seen in many Indian pieces. Perhaps the biggest difference lies in the use of color. In the Herāt, adjacent colors are generally contrasting and separated by a dark outline, whereas the Lahore rug has a profusion of tiny pink floral forms strewn across the red field with no outlining, creating a warmer, sweeter effect. There are also significant technical differences that distinguish Indian production, for example, the presence of multistrand (more than four) cotton warps and, in many instances, apricot or pale pink cotton wefts (in many of the Lahore pieces). These technical points hold true for the two Corcoran rugs.

Indian carpets with patterns of scrolling vines and blossoms were sufficiently prized in Europe that copies were made. One surviving example (fig. 65), known as the Kinghorne carpet, can be distinguished from its eastern model by a distinctive pinkish red in the pile and also by the use of flax (or hemp) as the foundation material. Possibly

made in England, the carpet has a border monogram incorporating the initials of John, 2nd earl of Kinghorne, and those of either his first wife, whom he married in 1618, or his second, whom he married in 1640. Either date is plausible for such a design, but the earlier one has been favored on historical grounds.³⁹ The presence of segmented blossoms confirms that the model was Indian, not Persian, and most probably a Lahore carpet.⁴⁰ Carpets with related patterns, but rarely symmetrical, were also woven in the Deccan (see fig. 137); these were also based on Lahore versions.

Fine-Weave Type

Jahāngīr's patronage encouraged new refinements in the arts. The energy, originality, and monumentality that were the hallmarks of painting and the decorative arts under Akbar were replaced gradually by a quiet elegance of line and finish. In carpets this refinement was achieved partly through the use of luxury materials that allowed a higher density of knots. Elaborate and intricate patterns could be knotted more successfully, and a tighter weave yielded grace-



ful, subtly graduated curvilinear forms. The ability to achieve beautiful curves was particularly desirable for the Persian-style designs with scrolling vines and animals or blossoms, because the balance and harmony of the pattern depended on those curves. All carpets attributed here to the period of Akbar consist of sheep's wool on a cotton foundation.

The beginning of the refinement process, in terms of materials, can be seen in a brilliant carpet now surviving in eight fragments, enough to reveal glorious colors and drawing but not enough to permit a reconstruction of the full pattern. The pile is short, which heightens the definition of the pattern. The fragments have a silk foundation and pile of fine sheep's wool, resulting in a count of slightly less than 500 knots per square inch. Only two rugs of the Akbar period, the small pictorial examples in Boston and Vienna (figs. 29, 31), with 460 and 430 knots per square inch, respectively, approach the fragments' tightness of weave, and it is unlikely that a finer weave could have been achieved on a cotton foundation.

Four fragments come from the field, four from border areas. Three pieces from the field (fig. 66;

cat. no. 16a) belong to the Musée des Arts Décoratifs, Paris. They do not adjoin but nevertheless convey a sense of the pattern. Two sinuously scrolling vine systems, one in light brown, one in green, are set against a blue ground. Each system crosses over and under the other and thus may be seen as of equal value, but, in fact, the green vines recede by virtue of their darker color, and the light brown vines incorporate more interesting and prominent elements: while the green stems terminate in leaves or blossoms, the brown vines have terminals of animal or bird heads. Two animal heads shown in frontal view, a lion holding fluttering ribbons in its mouth and an antlered stag, mark points where the brown vine splits in two. The heads of a rooster and an elephant are also included. Two fragments have triangular zones in one corner; these contain flowering plants in profile and a curious pluglike element. It is unclear what role these triangular zones might have played in the complete pattern; they might have been parts of a huge central medallion (although the arc of the third side is extremely shallow) or corner pieces in the field. The fourth field fragment, in Boston's Museum of Fine Arts,⁴¹ essentially repeats



Fig. 63. Herāt carpet with pattern of scrolling vines and blossoms. Iran, first quarter of the 17th century. Wool pile on cotton and silk foundation, 6'11½" x 5' (212 x 152.4 cm). Collection of the Corcoran Gallery of Art, Washington, D.C., William A. Clark Collection (26.287)



Fig. 64 (cat. no. 15). Carpet with pattern of scrolling vines and blossoms. Northern India, Lahore, second quarter of the 17th century. Collection of the Corcoran Gallery of Art, Washington, D.C., William A. Clark Collection (26.297)

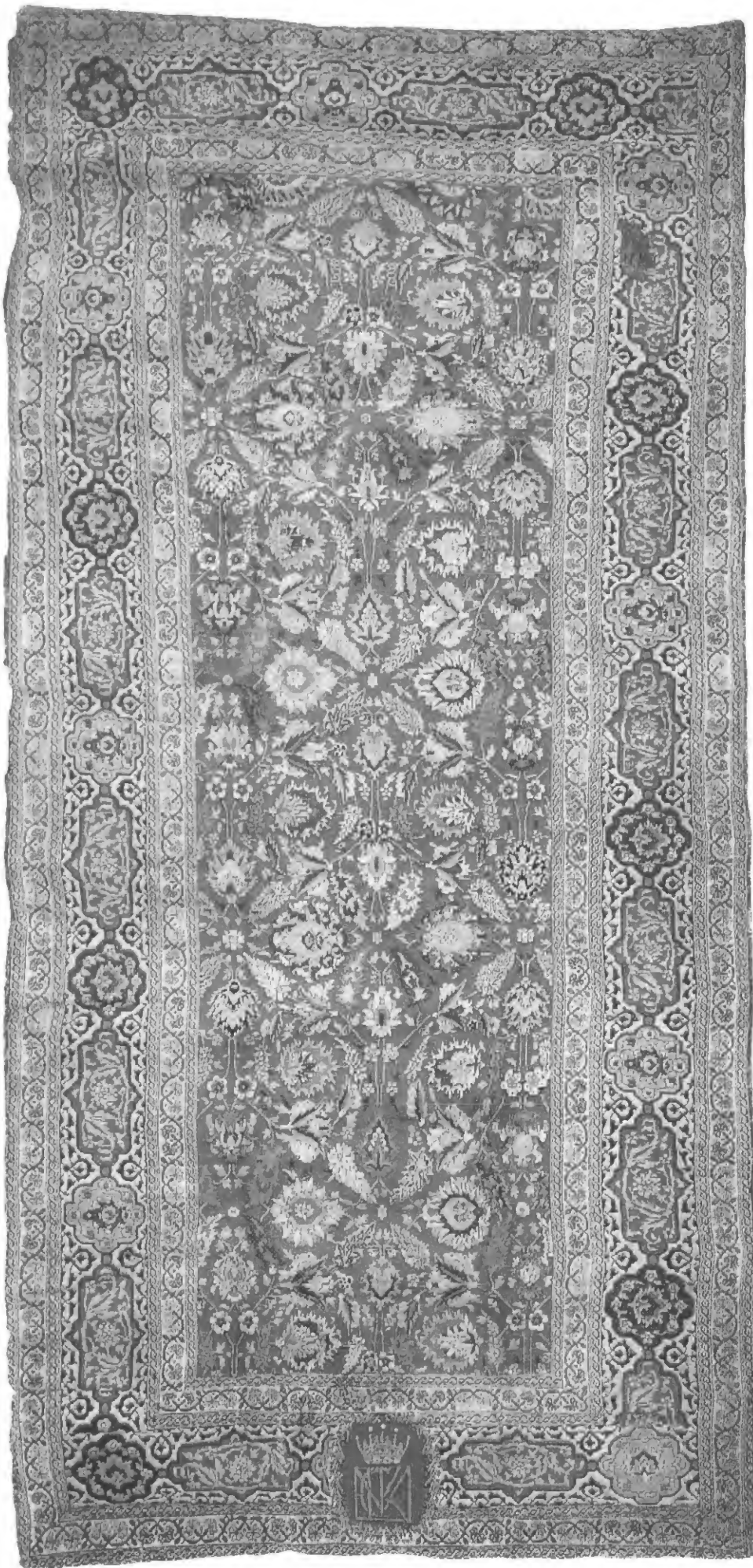


Fig. 65. Carpet with pattern of scrolling vines and blossoms, known as the Kinghorne carpet. England(?), ca. 1618 or 1640. Wool pile on flax (or hemp) foundation, 17' x 7' 11" (518.2 x 241.3 cm). Royal Museum of Scotland, Edinburgh (inv. no. 5020)



the pattern seen in two of the Paris pieces—the design centered on the antlered stag's head. This means that the pattern unit was employed, in one direction or the other, at least three times.

Two fragments of the main border survive, one in the Burrell Collection, Glasgow Art Gallery and Museum,⁴² and one, slightly less than full width, in the Nationalmuseum, Stockholm (fig. 67; cat. no. 16b). The border is divided into yellow and dark blue zones by a reciprocal trefoil outline. The border pattern, as fanciful and zoomorphic as that of the field, features lion masks and horned bovine heads, both shown frontally, in the alternating zones. These are complemented by pairs of fish, horses' heads (visible only in the full-width Burrell fragment), and wolves(?) biting the trefoil outlines. All are linked by a network of scrolling vines that continue uninterrupted from one color zone to the next.

Two additional fragments, one in the Musée des Arts Décoratifs, Paris (fig. 68, cat. no. 16c), and the other in the Kestner-Museum, Hannover,⁴³ come from another border, one about seven inches wide with a repeating pattern of arabesques and palmettes. The Paris piece has a narrow band of secondary pattern along one side.

These fragments have long been controversial in various ways. The first point of contention concerns their compatibility—whether they come from one carpet. Certain perceived technical differences have led some specialists to conclude that field and main border fragments come from separate carpets, but these observations do not seem to be based on firsthand examination.⁴⁴ On the contrary, close examination provides strong arguments that the fragments do indeed come from one carpet.⁴⁵ The warps are variously green, yellow-green, light green, and even ivory, with different shades sometimes



Fig. 67 (cat. no. 16b). Border fragment of a carpet with pattern of scrolling vines and animal heads. Northern India, Lahore, ca. 1610–20. Nationalmuseum, SKM, Stockholm (NMK 153/1899)



Fig. 68 (cat. no. 16c). Border fragment of a carpet with scrolling vines and animal heads. Northern India, Lahore, ca. 1610–20. Musée des Arts Décoratifs, Paris (A5212D)



Fig. 66 (cat. no. 16a). Fragments of a carpet with pattern of scrolling vines and animal heads. Northern India, Lahore, ca. 1610–20. Musée des Arts Décoratifs, Paris (A5212A, A5212B, A5212C)

present in the same piece. Discrete vertical bands of color (in the foundation), a feature of later silk-foundation carpets, occur so rarely that they must be accidental rather than planned. Indeed, some warps consist of strands of different shades plied together, which simply suggests that different dye lots were used. Wefts are generally red silk, but two fragments have areas of white silk used in random fashion.

Field fragments and main border pieces have in common two related “painterly” features previously noted in rather developmental stages—the use of color mixing and color shading (see Chapter 3, pp. 24ff.). In the field, red and pink knots are mixed in the large blossoms, and there is color shading from red to pink and from green to dark greenish blue. In the main border, red and pink are mixed in the circles around the horses’ eyes, and there is color shading from gray to beige on the fishes’ bellies. Knot counts are very close, averaging about 480 per square inch, and occasional *jufti* knotting (with knots tied over four warps instead of two, to save time) is found in several pieces.

The correspondence of these fragments on technical grounds, coupled with similarities of color, design, scale, and even provenance (several pieces have been linked to the Swedish diplomat-collector F. R. Martin), provides compelling evidence that these fragments once belonged to the same carpet. If that is so, then a rather prominent anomaly must be explained, or at least acknowledged: the unusually wide secondary border with a pattern of arabesques and palmettes. It might have separated field and main border or, more likely, framed the main border, with the narrow band of pattern visible on the Paris border fragment serving as the outermost band.

The other main point of controversy surrounding these fragments concerns their origin. Although most experts accept an Indian origin, doubts have been expressed because of the formality and classical restraint of the pattern.⁴⁶ It is indeed true that close parallels may be found in Persian art, especially the art of the fifteenth-century Timurids. A pattern consisting of scrolling vines terminating in animal and bird heads, with tendrils splitting off at points marked by lion masks shown frontally, is found as border illumination or manuscript decoration and is also depicted in paintings as textile decoration.⁴⁷

The pattern is conceptually very different from the fantastic-animal design of the red-ground Akbari fragments (figs. 21, 22; cat. nos. 1a, 1b), where animals

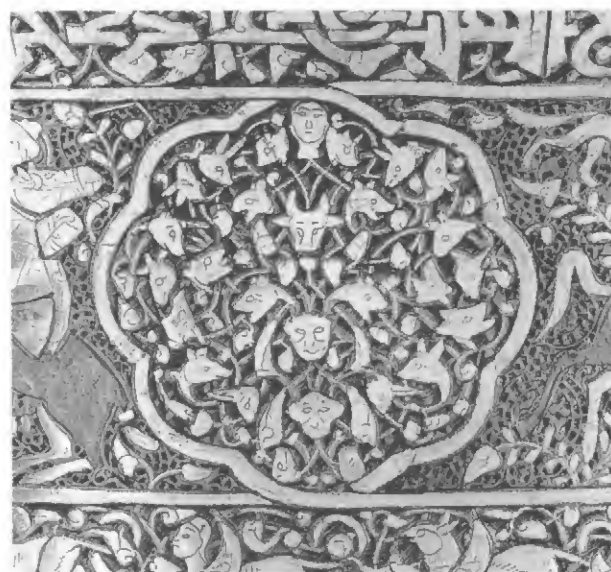


Fig. 69. Basin (detail). Egypt or Syria, ca. 1240s. Brass, silver, and black organic material. Freer Gallery of Art, Smithsonian Institution, Washington, D.C. (55.10)

emerge from the jaws of other animals. Animal heads as terminals of vine scrolls are derived from other traditions. The heads themselves, in both Timurid and Mughal examples, remind us of earlier depictions of the “talking tree” of the Alexander legend, the oracular tree that urged Alexander not to invade India, and of the terrible tree of hell, known as *Zaqqūm*, whose poisonous fruit resembled human and animal heads.⁴⁸ However, these images do not involve scrolls. Animated scrolls, that is, vine scrolls incorporating human and animal heads, were a decorative staple of medieval Islamic metalwork made in Egypt, Syria, and the Jazira (fig. 69). This decorative tradition—perhaps reinforced by the appearance of European grotesques in Eastern courts—was continued by the Timurids and their heirs, the Mughals.

Could these fragments come from a Timurid carpet? There is little material with which to make a direct comparison, since only two carpets have been put forth as plausibly Timurid and they represent, in their comparative lack of refinement, very different types of production.⁴⁹ As we have seen, the sophisticated pattern woven into these fragments was certainly not beyond the abilities of a major Timurid artist, but did the type of court workshop required for a luxury production based on cartoons exist in Herāt at that time? Whatever the answer to that question, the presence of cochineal in this carpet (see Appendix 1) rules out Timurid production, since cochineal does not appear in Old World weavings until the sixteenth century.

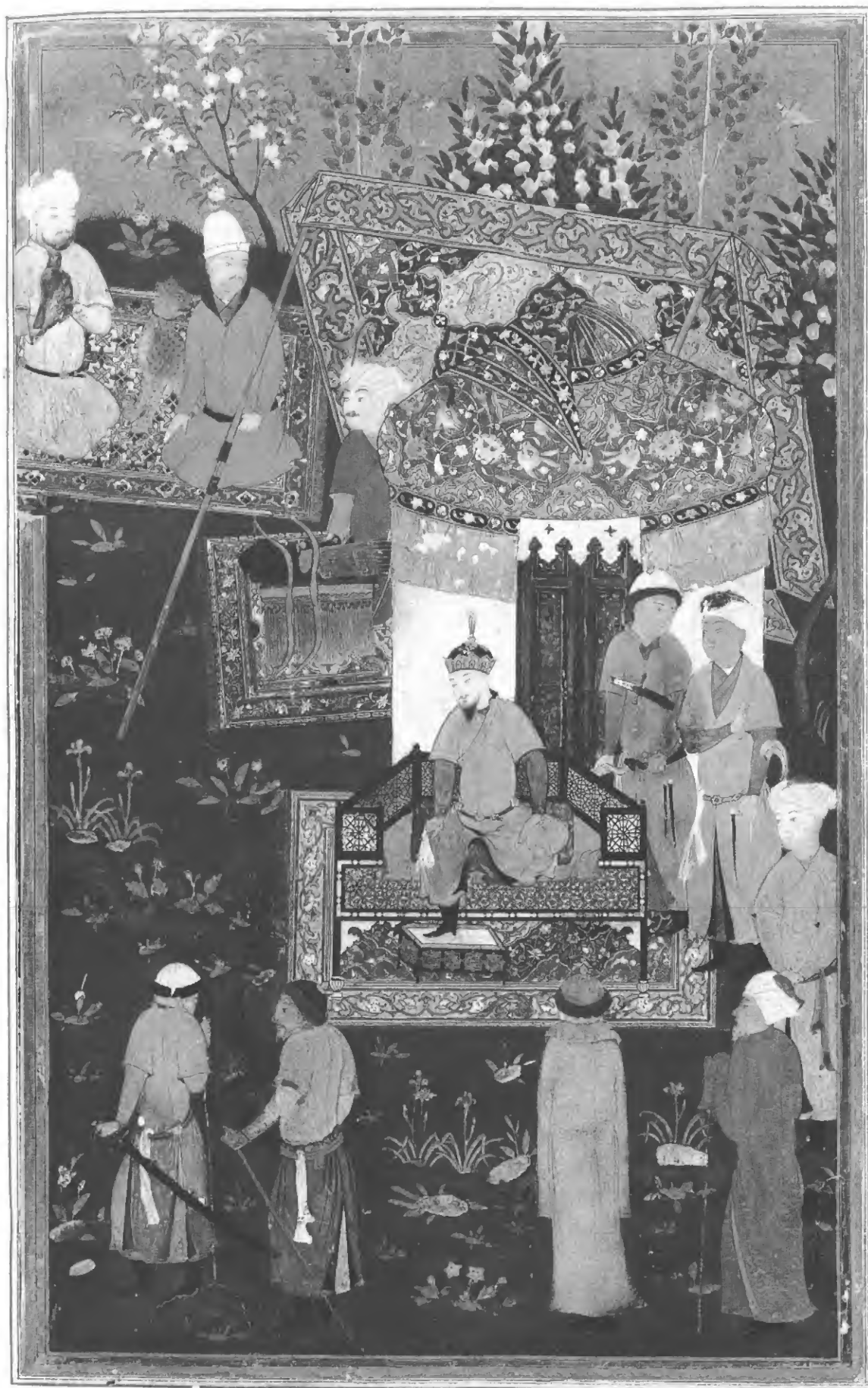


Fig. 70. *Timur Granting an Audience in Balkh on the Occasion of His Accession to Power in April 1370* (detail). Opaque watercolor and gold on paper. From a *Zafarnāma* (The Book of Conquests) manuscript. Iran, Herāt(?), ca. 1480 (painting). The John Work Garrett Library of the Johns Hopkins University, Baltimore (GAR.3, f. 82b)



Fig. 71. Margin illumination (detail). Opaque watercolor and gold on paper. On a folio from the Jahāngīr Album. Mughal, ca. 1609–18. Staatsbibliothek zu Berlin–Orientabteilung (*Libri picturati* A-117, f. 2b)

Fig. 72. Detail of fig. 2. *Emperor Jahāngīr Weighs Prince Khurram*. Mughal, ca. 1615–25. Opaque watercolor and gold on paper. From a manuscript of the *Tuzuk-i Jahāngīrī* (*The Memoirs of Jahāngīr*). British Museum, London (1948.10-9.069)



There are several reasons to consider the fragments Indian. First, although the pattern may seem Persian in its refinement and formality, specific elements betray an Indian interest in naturalism. The rooster has colorful streaks of red and white on its neck, and the elephant's head is drawn with a degree of sympathy and understanding unknown in Timurid examples. Depictions of elephants in Timurid decoration are rare and those that exist do not seem to be based on actual observation.⁵⁰ Second, the use of color in an almost painterly way is a distinctly Indian characteristic. One can point to the color mixing and color shading in this regard, and both techniques were developed more fully in later and more finely woven Indian carpets. And third, these fragments share certain technical features, such as dyed silk warps and wefts, with other unquestionably Indian carpets. (The foundation silk of Persian carpets is rarely dyed.)

The source for the animate-scroll pattern was probably Timurid, which explains its classical formality. In fact, a model was close at hand, in the *Zafarnāma*, a manuscript dated 1467, with paintings added about 1480, that entered the imperial library during Akbar's time. Inscriptions in the hands of Jahāngīr and Shāh Jahān show that the volume remained in the royal library during their reigns. The

emperor Shāh Jahān, in fact, who called it "one of the marvels of the age" and pledged to keep it in his presence and read it often, recorded its transfer to his library from his father's on the very day of his accession to the throne.⁵¹ One painting in the *Zafarnāma*, *Timur Granting an Audience in Balkh*, shows the king enthroned before a yurt, or domed tent (fig. 70). The scene is replete with brilliant textile designs, especially the one with a pattern of scrolling vines and animal heads covering the dome of the yurt.

A date of about 1610–20 may be proposed for the animate-scroll carpet. Although there are signs of experimental production (*jufti* knotting, zones of irregular coloring in both warps and wefts, and camel's hair in the pile), the sophistication of color usage suggests an intermediate point of development between the carpets of Akbar's time and the even more refined pieces from the end of Jahāngīr's reign. The first "luxury" production might have been an experiment. Playful aspects of the design are mirrored in the margins of an album made for Jahāngīr during this decade; relevant motifs include fantastic bird heads and fish (fig. 71). Two carpets featuring scrolling vines, lion masks, and an animal head in profile are depicted in a painting of about 1615, *Jahāngīr Weighs Prince Khurram* (Shāh Jahān) (figs. 2, 72).

The role of manuscripts in the royal library as reference tools for artists at the Mughal court should not be underestimated. Another example, and one that demonstrates Jahāngīr's respect for his Timurid ancestry, is a painting from the beginning of his rule, about 1605–6, which shows him seated on a gold throne under a canopy as Prince Khusrau offers him a cup of wine (fig. 73). The feet of the principals in this private audience scene rest on a Timurid carpet with a pattern of rows of geometric units, a type well known from fifteenth-century painting.⁵² Small portable Timurid objects of value, such as manuscripts and jades, were prized at the Mughal court, but it is unlikely that such a large

object as a Timurid carpet would have found its way to India, so Jahāngīr must have had his court painter, Manohar, take the design from a representation in a fifteenth-century manuscript housed in the imperial library. Jahāngīr was thus able to have himself portrayed in the setting of the Timurid court.

The substitution of silk for cotton in the foundation was just the first step in the process of achieving a finer weave. The next step was to replace sheep's wool with pile material of a fineness commensurate with that of the silk foundation. One might expect silk to be the pile material of choice, as it was in most carpet-weaving societies, but the preferred luxury fiber was fine goat's hair, or pashmina, discussed



Fig. 73. Manohar. *Jahāngīr in Private Audience*. Mughal, ca. 1605–6. Opaque watercolor and gold on paper. British Museum, London (1920 9-17 02).

Fig. 74 (cat. no. 17). Fragmentary pashmina carpet with pattern of scrolling vines and blossoms. Northern India, Kashmir or Lahore, ca. 1620–25. Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon (T 72)







Fig. 76. Detail of fig. 20. Fragmentary Herāt carpet with pattern of scrolling vines and blossoms. Iran, last quarter of the 16th century. Wool pile on cotton and silk foundation, 12'6" x 12'9" (381 x 388.6 cm). Cincinnati Art Museum, John J. Emery Fund (1982.117)



on pages 22ff. Only in India were sumptuous silk carpets made in imitation of a type even more luxurious, the pashmina carpets that represent the peak of Indian carpet weaving.

Only about forty pashmina carpets have survived. Of these perhaps twenty, almost all in fragmentary or damaged form, date from the period of Shāh Jahān. Several dispersed fragments come from one magnificent carpet that was probably made late in Jahāngīr's reign. The largest piece, representing the full length but just half the original width, is in

the Museu Calouste Gulbenkian, Lisbon (figs. 74, 75; cat. no. 17). Another large fragment, now in a private collection in Europe, full length and about a quarter of the original width, with no trace of side border, comes from the middle of the right half of the field. A third element is a small piece in the Metropolitan Museum.³³ The provenance of the Gulbenkian piece is not known, but the second fragment is said to have come from Hyderabad. One can imagine splendid carpets among the holdings of the fabulously wealthy nizams of Hyderabad, but



Fig. 77. Painted plaster decoration in the tomb of Akbar. Agra, Sikandra, 1613

the founding of the dynasty in 1722 precludes the possibility that a carpet such as this was acquired by them when new. When the Hyderabad fragment appeared on the London market a number of years ago, it was literally in shreds, consisting of many small bits (rather like the small Metropolitan fragment) that were then carefully joined.

The motifs are purely floral, and the rug suggests a lush garden of a classical Persian type. Three distinct vine-scroll systems are superimposed on a brilliant red ground in a distinctly Persian way. Blossoms and complex combinations of blossoms partially covered by curving serrated leaves are taken from Persian designs of the late sixteenth and early seventeenth century. The huge fantastic blossoms, particularly the circular rotating ones with the outer ring of little flowers partially concealed by leaves, derive from the finest carpets of the Herāt type (fig. 76). The distinctly Indian quality of this carpet can be seen in its vivid coloring and ultranaturalistic representations of floral forms, whereby natural form is turned into something truly fantastic. It is also specifically Indian in certain of the motifs used, such as the large multicolored segmented leaves. The main border consists of two overlapping vine scrolls that bifurcate and reciprocate, in the most lyrically beautiful fashion, against a sumptuous yellow ground. The combination of silk foundation and pashmina pile allowed the weaver to work at a new level of excellence, and the resulting count of almost 800 knots per square inch explains the skillfully drawn curves in field and border.

This earliest of surviving pashmina carpets probably dates from late in the reign of Jahāngīr, between 1620 and 1625, when the appeal of Persian classicism was at its strongest and before the flower style had been adopted as the new standard in taste under Shāh Jahān. A good example of the Persian style as favored by Jahāngīr may be seen in a painted panel of about 1613 decorating Akbar's tomb in Sikandra (fig. 77). The classical Persian symmetrical vine-scroll network is enlivened with large complex blossoms similar to ones in the carpet. Indian elements in the form of curving segmented blossoms have been incorporated, and the overall effect is brightened by the use of a gold ground (a rich yellow ground figures in the borders of both the animate-scroll carpet and the Gulbenkian example).

The Gulbenkian carpet and related fragments date from just a few years later than the animate-scroll carpet that began the new trend to greater luxury and fineness of weave. Certain details of

leaves, such as the representation of interior veins and the juxtaposition of two colors with no separating outline, suggest a close connection between the two. The Gulbenkian fragment, like all later pashmina carpets, is woven on a silk foundation whose multicolored warps (ivory, red, and green in this case) are organized in bands. Such stripes are hinted at in the animate-scroll fragments, but there they seem more the result of different dye lots than of intent. Here it was intentional. It is possible that the stripes, although not absolutely consistent in width, provided a method of registration for the weavers tying the knots. Be that as it may, the result is an appealingly bright warp fringe at both ends.

The vast majority of the next generation of fine-weave carpets exhibit the flower style introduced by Jahāngīr and popularized by Shāh Jahān, as discussed in the section that follows. However, there are two carpets with pashmina pile on silk foundation, both in the collection of the Metropolitan Museum, with field patterns in the Persian style. The more spectacular one aesthetically (figs. 78, 79; cat. no. 18) is unfortunately very fragmentary. The narrow sliver of field that remains reveals sensuously coiled vine scrolls featuring complex blossoms. Its style approximates the Gulbenkian's but is a little more stolid in effect, slightly less lyrical in its use of heavier outlining. The second carpet (figs. 80, 81) is complete. The field pattern is a variation of the old Herāt "in-and-out palmette" type, with pairs of serrated lancet leaves inserted. Motifs are organized into rows in a repeat pattern.

Field patterns alone might tempt us to consider a date of execution in the 1620s, contemporaneous with the Gulbenkian piece, but the main border designs necessitate a later dating, about 1650, because of their relationship to flower-style carpets probably of that time. The fragmentary piece has a border with sweeping scrolls with little cloud wisps attached; this pattern is seen also in a pashmina flower-and-lattice carpet (see fig. 104; cat. no. 26). The complete carpet features a border with a row of flowering plants; the multidirectional floral spray in the center of each long side border is found also in Jaipur carpets acquired slightly after mid century.⁵⁴ These two carpets prove that demand for Persian-style goods was not altogether supplanted at the imperial level by the new flower style.

The attribution of these fine-weave carpets will be discussed with the carpets of flower style (see pp. 113ff.).



Fig. 78 (cat. no. 18). Fragments of a pashmina carpet with pattern of scrolling vines and blossoms. Northern India, Kashmir or Lahore, ca. 1650. The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.719)

Fig. 79 (cat. no. 18). Detail of fig. 78 (*opposite*)





Fig. 80. Carpet with pattern of scrolling vines and blossoms. Northern India, Kashmir or Lahore, ca. 1650. Pashmina pile on silk foundation, 13'4" x 5'6" (406.4 x 167.6 cm). The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.725)

Fig. 81. Detail of fig. 80 (*opposite*)



THE FLOWER STYLE

The key development in carpet design—and in all art—during the reign of Shāh Jahān was the widespread appearance of a new style that featured naturalistic flowering plants shown in profile against a plain background or formally arranged in rows.⁵⁵ More elaborate patterns combining various flowering plants or just vines and blossoms—but exhibiting a heightened degree of naturalism—with lattice patterns followed. The flower style came to dominate artistic decoration in all media—architecture, manuscript margins and bindings, textiles, carpets, and objects such as metalwork, jade, glass, and wood and ivory marquetry work. Its preeminent position may be seen in paintings such as *Shāh Jahān Receives His Three Eldest Sons and Āṣaf Khān During His Accession Ceremonies* (fig. 3), in which the walls of the Hall of Public Audience in Agra bloom with flowers, and *Aurangzeb and His Third Son, Sultan Ā'zam, with Courtiers* (fig. 4), full of costumes and a carpet blossoming in the new fashion.

The flower style did not emerge suddenly, nor was it originated by Shāh Jahān's court artists. Floral motifs, blossoms and vines, even whole plants, were commonly represented in Indian art during Akbar's reign and well into Jahāngīr's. But the representations were not especially naturalistic and they were not formally arranged. Plants were routinely treated as secondary decorative elements or as parts of large-scale repeat patterns. It is important to note that two of the most significant artistic projects of Jahāngīr's reign, the great album compiled between 1599 and 1618 and the tomb of I'timād al-Daula, completed in 1628, are classic examples of the Persian style in India (see pp. 31, 33). The absence of formally arranged flowering plants on these two imperial productions signifies that the flower style had not yet become part of the standard decorative vocabulary, but the origin of the style can in fact be linked to Jahāngīr's time.

In March 1620, Jahāngīr achieved a long-desired ambition to visit Kashmir in springtime, and he was simply overwhelmed by the beauty and abundance of its flora:

Kashmir is a garden of eternal spring, or an iron fort to a palace of kings—a delightful flower-bed, and a heart-expanding heritage for dervishes. Its pleasant meads and enchanting cascades are beyond all description. There are running streams and fountains beyond count. Wherever the eye

reaches, there are verdure and running water. The red rose, the violet, and the narcissus grow of themselves; in the fields, there are all kinds of flowers and all sorts of sweet-scented herbs more than can be calculated. In the soul-enchanting spring the hills and plains are filled with blossoms; the gates, the walls, the courts, the roofs, are lighted up by the torches of banquet-adorning tulips. What shall we say of these things or of the wide meadows and the fragrant trefoil?⁵⁶

The emperor then recites a version that continues this theme, using typical Persian metaphors, in which he calls flowers “garden-nymphs” and refers to “flower-carpets.” His interest was quite specialized and his powers of observation acute, and he describes tulips, jasmines, red roses, lilies, and a flower called the *ja'fari* in appreciative detail. His enthusiasm was such that he had his most accomplished natural history painter, Manṣūr, make more than a hundred paintings of flowers.⁵⁷ Only three of Manṣūr's flower paintings are known to survive, a western Asiatic tulip in the Maulana Azad Library of the Aligarh Muslim University in Uttar Pradesh and an iris and a narcissus in the Golestān Palace, Tehran.⁵⁸

Another factor in the process was the undocumented but certain presence of European herbals at the Mughal court. Specific copies of European engravings have been identified in slightly later albums, but even Manṣūr's western Asiatic tulip, a species not native to Kashmir, has certain hallmarks of the European herbalist style, including the formal pose and the hovering butterfly and dragonfly overhead. Perhaps the inspiration to focus on flowering plants was Jahāngīr's and the specific model employed by Manṣūr was from an herbal.⁵⁹ An album assembled for Prince Dārā Shikūh and dedicated in his hand to his wife in 1641–42 contains numerous paintings of flowers that combine Indian naturalism with European herbalist formality in the way the style came to be popularized (fig. 82).

Manṣūr's flower “portraits” do not seem to have evolved into the flower style and been adapted to general decorative use until the reign of Shāh Jahān. They appear first as painted architectural decoration in the *Pādshāhnāma*, the chronicle of Shāh Jahān's reign, beginning about 1630 (see fig. 3). They appear in fully developed form, in rows, in marble dado reliefs in the Shāh Burj (Royal Tower) at Agra Fort (fig. 83). That structure was completed in 1637. They



Fig. 82. *An Iris Plant and Butterfly*. Opaque watercolor and gold on paper. From the Dārā Shikūh Album. Mughal, ca. 1635. India Office Library and Records, British Library, London (Add. Or. 3129, f. 41v)

also appear in the marble dadoes of the Taj Mahal, finished in 1648. Formal flowering plants were executed in the *pietra dura* technique in the Hall of Private Audience in Delhi (fig. 84), sometime between 1639 and 1648, and on the cenotaphs in the Taj Mahal in Agra and in the tomb of Jahāngīr in Lahore. In the latter instances, the flowers are incorporated into a Europeanized lattice pattern defined by vines that twist and fold. Gilded ceiling decoration in the Ārāmgāh (emperor's sleeping chamber) in the Red Fort, Delhi (fig. 85), has a lattice design that incorporates a continuous pattern of blossoms

and vines, a variation of the flower style that became popular at this time. The flowers are not shown as full plants in profile; only their blossoms are utilized. Formal flowering plants are also a feature of album margins and objects of the Shāh Jahān period; these are found in rows and also in a variety of lattice patterns related closely to contemporaneous *pietra dura* work (figs. 86, 87).

Manṣūr's depictions of flowering plants are extremely naturalistic and the species are easily identified. Later, however, as plants became part of the decorative repertoire, considerable artistic



Fig. 83. Marble dado panel in the Shāh Burj, Agra Fort. Mughal, completed 1637

liberties were taken, often making identification problematic. Certain identifying details may be omitted, blossoms of different plants may be shown growing from a single stem, and various parts of different plants may be combined. Each part may be shown in a most realistic way but in combinations that are imaginary. Also, over time, depictions of plants became more stylized and less naturalistic, making identification yet more difficult. Patterns became more elaborate, and complicated lattice systems were introduced as matrices for the plants.



Fig. 84. *Pietra dura* panel in the Hall of Private Audience, Red Fort. Delhi, Mughal, 1639–48

These trends tended to diminish the naturalistic effect prevalent in earlier, simpler representations.

The flower style may justifiably be seen as the epitome of Mughal decoration. It may also be viewed, particularly in contrast to the Persian-style vine-scroll patterns, as a local style in that it was developed in India by court artists. But these artists drew from several different sources, just as they had under the patronage of Akbar and Jahāngīr. The flowers themselves may be indigenous types, foreign varieties introduced to India, or foreign varieties copied from depictions in herbals,⁶⁰ but they were typically depicted, until greater stylization occurred, in the naturalistic mode favored by Mughal painters. We have seen that the poses, extra details such as insects hovering overhead, and even certain images were taken from European herbals. Even Chinese tradition is invoked in the little cloud wisps that occasionally scud by. One artistic tradition apparently not represented in this process of synthesis is the Persian, perhaps because that was the origin of the style that was largely being displaced, but the cloud wisps, like other motifs of Chinese origin, may well have entered the Indian decorative vocabulary through Persian sources.

Single-Flower Design

A small number of rugs have field patterns featuring a single large flowering plant contained within a



Fig. 85. Gilded ceiling in the Ārāmgāh, Red Fort, Delhi, Mughal, 1639–48



Fig. 86. Margin of a folio (detail). Opaque watercolor and gold on paper. From an imperial album. Mughal, ca. 1620–30. Private collection

Fig. 87. Margin of a folio (detail). Opaque watercolor and gold on paper. From an imperial album. Mughal, ca. 1645. Private collection

space defined by a niche. Because of their pictorial nature, these are the most visually arresting of the flower-style carpets. Here the flowering plant tends to be shown almost as a portrait rather than as part of a repeating pattern, as in other types. A splendid example in pashmina on a silk foundation is in a private collection in Belgium (fig. 88; cat. no. 19). With about 2,000 knots per square inch, it has the finest weave of any classical Indian carpet to survive intact.⁶¹

The large poppy plant, with five round blossoms consisting of myriad small pointed petals, has a leafy base and stems. It stands erect against a soft light brown background and is flanked by two small tulips with red and pink petals. These plants seem to be in motion, with a perceptible sway in the stems and a twist and curl in the leaves. The plants grow from a little landscape that adds to the pictorial aspect of the representation. Color changes define irregularities in the ground area of the landscape, and tiny plants sprout in profusion. The field zone is surmounted by a heavily outlined arch defined by a thick vine that turns on itself and has leafy projections. Above this are ivory spandrels patterned symmetrically (the field pattern is not exactly symmetrical) with vines, leaves, and more poppy blossoms. The crimson main border has a fine undulating vine whose offshoots terminate in alternately reversed ivory flower heads. Long twisted leaves project from the main stem, giving a subtle sense of movement.

An architectural niche is implied by the arch of this rug. Small fragments of another example of this type show the architecture more explicitly in the form of engaged columns flanking the field area. A piece in the Metropolitan Museum (fig. 10), from the lower field, has, at the left of the strip of landscape, the lower part of an architectural column and its base. The Museum of Fine Arts in Boston has three small pashmina fragments probably from the same rug. One of them preserves this rug's right-column capital, on which the vine scroll of the niche head rests. The other two fragments have an undulating vine and white blossoms similar to the border of the Belgian rug; these must be from the border of the Metropolitan fragment.⁶² The Belgian rug and the Metropolitan/Boston fragments are unusual among pashmina rugs in having silk warps of just ivory instead of the normal colored stripes.

The Metropolitan owns a complete piece with a closely related design (without engaged columns),

but it is not finely woven and has standard materials (fig. 89; cat. no. 20). The foundation is all cotton except for the second weft (of three), which is red silk. The pile is sheep's wool and there are 225 knots per square inch. One is at first tempted, in comparing the McMullan rug with the Belgian flower-and-niche rug, to consider the lower quality as a sign of degeneration and hence later production. But similarities in pattern, drawing, and color argue for contemporaneous manufacture, possibly at the same workshop. Confirmation of this notion can be found in other examples as well, and this suggests that cartoons were used for the manufacture of carpets of different grade. It may also mean that standard-grade rugs were made at the same imperial workshops that produced the finest pashmina pieces.

Comparing the Belgian and McMullan rugs allows us to judge how much more effective coloristic "tricks" are in a fine-weave rug than in a standard grade. The leafy branches of the large flower in the Belgian rug are subtly graduated through several shades of green and ivory, giving substance and form to what would otherwise be merely a pattern or shape. The landscape is handled the same way, giving three-dimensionality and texture to a grassy hillock. Such subtlety of effect could not be achieved in the McMullan rug, although a limited attempt at shading may be seen in the combined red and pink in the border blossoms and in the ivory and beige in the flower heads of the large plant in the field.

The multigrade approach to manufacture has a parallel in Persian production. One thinks first of certain related Polonaise and Indo-Persian designs but, apart from the rich appearance of metal brocading in the former, there is not a significant difference in quality. More relevant comparisons may be found in the Herāt group. Three finely woven fragments in Boston and Washington from one carpet (see fig. 90 for two) are made of pashmina on a silk foundation, but they are not Indian.⁶³ With a knot count exceeding 600 per square inch, these are perhaps the finest wool pile carpets known from Iran. The field has a pattern of lobed compartments containing vines and leaves and, most noticeably, sinuously twisting cloud bands. A closely related field pattern is found in the Clam-Gallas carpet in Vienna (fig. 91), but the quality of weave is much lower.

The three fine-weave Persian fragments have several qualities that are seen later in Indian pieces. One, of course, is the use of pashmina as a pile



Fig. 88 (cat. no. 19). Pashmina carpet with niche-and-flower design. Northern India, Kashmir or Lahore, ca. 1630–40.
Private collection



Fig. 89 (cat. no. 20). Carpet with niche-and-flower design. Northern India, Kashmir or Lahore, ca. 1630–40. The Metropolitan Museum of Art, New York; Bequest of Joseph V. McMullan, 1973 (1974.149.2)



Fig. 90. Two fragments from a Herāt carpet with compartment design. Iran, second half of the 16th century. Pashmina and cotton pile on silk foundation, 2'7" x 2'3½" (78.7 x 69.9 cm) and 1'4" x 1'2½" (40.6 x 36.8 cm). The Textile Museum, Washington, D.C. (R33.4.15 and R33.4.9)

material. Although the material is perhaps best known from Kashmir shawls, there is no reason to assume that Indian weavers came up with this idea first. Another is the employment of *ton-sur-ton* coloring, in which shades of the same or similar colors are juxtaposed without any separating outline. Vines, leaves, and blossoms in pink on a red ground and in ocher on an ivory ground are evident in field compartments of one Washington fragment. This feature, uncommon in Persian carpets, becomes a characteristic of Indian examples. A third point is the fact that the portion of black inner border visible on the same Washington fragment was woven on the diagonal, meaning that the carpet was originally polygonal. A polygonal Indian carpet survives in the Calico Museum of Textiles in Ahmadabad. These points, plus the production of carpets with similar designs in different grades, strengthen the previous connections noted between Indian and Persian carpets.

Another example of the flower-and-niche design in pashmina is the so-called Aynard carpet (fig. 92;

Fig. 91. Herāt carpet with compartment design, known as the Clam-Gallas carpet (detail). Iran, last quarter of the 16th century. Wool pile on cotton and wool foundation, 17'8½" x 8'10¼" (539.7 x 269.9 cm). Österreichisches Museum für Angewandte Kunst, Vienna (T9026)

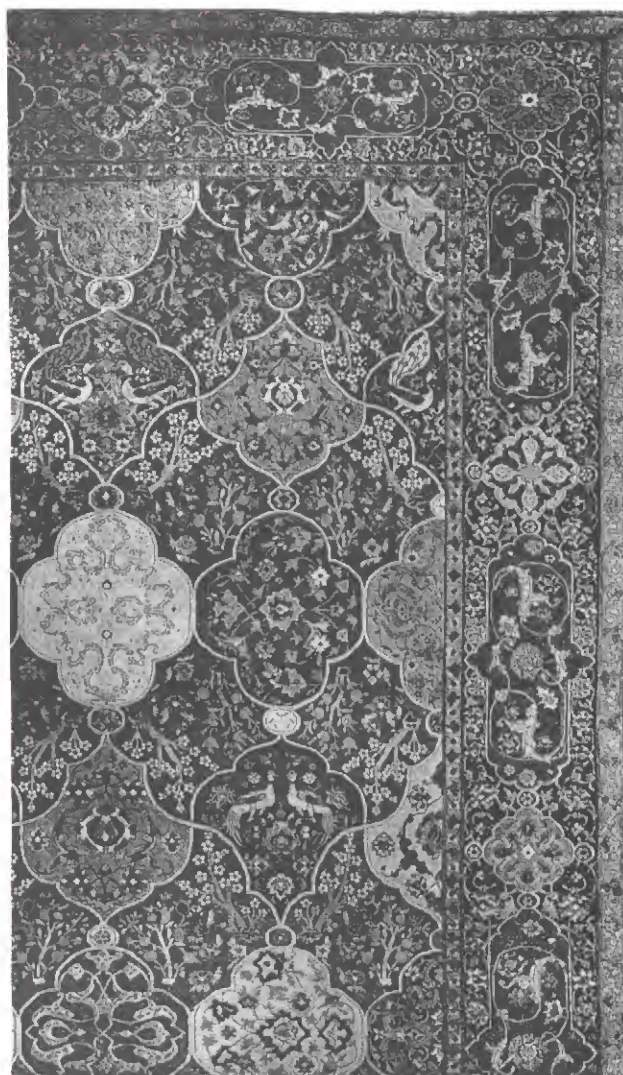




Fig. 92 (cat. no. 21). Pashmina carpet with niche-and-flower design. Northern India, Kashmir or Lahore, ca. 1630–40. Carmen Thyssen-Bornemisza Collection on loan to Fundación Colección Thyssen-Bornemisza, Madrid (T-90)

cat. no. 21), named for a former owner but now belonging to the Carmen Thyssen-Bornemisza Collection. It has a somewhat more active field pattern than the others, with many more fantastic blossoms sprouting from the main plant. Leaves twist and turn while little Chinese-style clouds puff through vacant spaces. Cockscomb, tulips, and poppies(?) emerge from the graduated ground, and a stream is represented at the bottom in ivory with black ripples. Cypress trees grow at the sides of the field and support the niche head like columns. Since there are no borders at the sides and only narrow borders at the top and bottom, this rug must have been reduced from its original format. The surviving border seems too narrow to have been the main border and too wide to have been a guard stripe. This, plus the presence of patches (particularly the smaller flower on the central stem) from another very similar example, has led to the suggestion that the Aynard carpet might once have been part of a multiple-niche work with several field sections united by a larger border that is now missing.⁶⁴

Indian rugs with flowering plants within niches have customarily been called prayer rugs,⁶⁵ but there is good reason to reconsider this identification. First, the few depictions of prayer rugs in Mughal paintings show them with plain fields, not elaborate directional floral patterns.⁶⁶ Second, there is ample evidence that panels with flowers, in various media, were used vertically as decoration for architecture, both fixed and portable, and would have had nothing to do with prayer. *Qanāts*, the screens surrounding the tents of imperial cities that were set up when the emperor was traveling or campaigning, are described in literature and depicted in paintings as bearing flower designs.⁶⁷ These were normally made of painted cotton, but Akbar was said to have introduced panels made of carpet.⁶⁸ Perhaps the Aynard carpet was part of a *qanāt*.

Some painted scenes of Shāh Jahān in audience show a framed, recessed rectangular space behind the throne. The recess contains a representation of a flowering plant in color.⁶⁹ What is suggested here is a window open to a garden behind, a niche through which the viewer sees flowering plants in a splendid setting beyond the building's walls. Many of these flower images seem to adorn matchstick-type hangings that allow an obstructed glimpse of what lies behind, but other hangings may be velvets or pashmina rugs.

It is difficult to be precise about the dating of these flower-and-niche rugs. If any of the flower-

style carpets come from early in Shāh Jahān's reign, though, the flower-and-niche rugs would be the most likely. They are closest in spirit—in their naturalistic and pictorial qualities—to the flower paintings Manṣūr made for Jahāngīr. Other types are less pictorial, and the flowers serve only as elements in repeat patterns. Also, it is tempting to put them early in Shāh Jahān's period—at least the Belgian rug—because of a style that Jahāngīr's powerful and influential wife, Nūr Jahān, is said to have originated: under her influence, carpets known as *farsh-i chandānī* (sandalwood-colored) became fashionable.⁷⁰ Although all of these rugs employ light brown to a considerable degree, the Belgian rug, with its soft brown field, seems by far the best candidate. However, the nature of the thick vine defining the arch in the field, with its twisting around implied “bars” in a very European style, suggests a somewhat later dating, so perhaps its coloration is just reminiscent of the fashion initiated by Nūr Jahān.

Rows of Flowers or Trees

The group of carpets with field patterns of flowering plants arranged in rows is quite large, numbering over fifty pieces. The standard format is rectangular, but within this format there are many variations. A well-preserved example in the Metropolitan Museum (figs. 93, 94; cat. no. 22), formerly in the Jaipur Collection, once had an inventory label stating that it had been purchased in 1656 in Lahore.⁷¹ The plants are arranged in seven rows, all oriented to the same end of the rug. The border is an intricate pattern of scrolling vines and blossoms flanked by pairs of curved leaves or little blossoms forming a leaf shape. The materials and weave are typical of the standard grade. The pile is sheep's wool and the foundation is cotton. Knotting, at about 150 knots per square inch, is fine enough to achieve considerable definition in the plants and the border pattern.

A smaller example, now in a European private collection, was also formerly in the Jaipur Collection (fig. 95; cat. no. 23).⁷² Here the plants are arranged in two rows, each oriented to the long central axis of the field, a line now damaged, probably from folding. Although this is not a fine-weave rug, related colors are juxtaposed, in leaves and blossoms, giving three-dimensionality to some of the floral forms. The border pattern repeats the motifs seen in the field in reduced scale and in a single row oriented



Fig. 93 (cat. no. 22). Carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. The Metropolitan Museum of Art, New York; Purchase, Florance Waterbury Bequest and Rogers Fund, 1970 (1970.321)

Fig. 94 (cat. no. 22). Detail of fig. 93 (*opposite*)





Fig. 95 (cat. no. 23). Carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. European private collection



Fig. 96. Carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. Pashmina pile on silk foundation, 6'4" x 3'10" (193 x 116.8 cm). The Frick Collection, New York (16.10.8)



Fig. 97. Fragmentary carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. Wool pile on cotton and silk foundation, 19' 8" x 11' 6" (599.4 x 350.5 cm). Collection of the maharaja of Jaipur, India

to the field. About fifteen other examples with flowering plants in the main border survive. Most come from or are still part of the Jaipur Collection. These rugs are unlike figure 95 in that the rows of flowers in the field are all oriented toward one of the long sides; all are large carpets (two approach 34 feet in length), and several may have been made as pairs, since they are so close in size (although the patterns do not match precisely).⁷³

There are just two pashmina rugs with rows of flowering plants from this period. One belongs to the Frick Collection in New York (fig. 96).⁷⁴ It is small, and its field accommodates just two rows of plants oriented to the same end of the rug. The composition here is crowded and individual units lack clarity. The other, in the Walters Art Gallery, Baltimore, also a small piece, has thirteen rows of small gold marigolds on a taupe ground.⁷⁵ This rug is atypical in having rows of flowering plants of such small scale that the design seems more appropriate to a textile. It is no wonder that pashmina rugs were often mistaken for velvets in older literature; they feel like velvet, and some have patterns seen in that material.

The largest part of an unusual flower-style carpet survives in the collection of the maharaja of Jaipur (fig. 97).⁷⁶ Other fragments are scattered among various collections.⁷⁷ What is evident only from the large Jaipur section is that borders actually intrude into the field pattern and define a separate interior space. This is not the result of some later piecing of fragments; the carpet was woven this way. One can only speculate that the carpet, whose original format has not been established, might have had some ceremonial function or that it could have been commissioned for a tent, with interior borders indicating the placement of interior partitions. If pashmina carpets may be termed imperial grade, then this carpet, and many others in the flower style, may be considered subimperial because there is some silk in the foundation, usually the second weft shoot (the rest are cotton).

One variation on the pattern of rows of formal plants is present in two carpets formerly in Jaipur (their present whereabouts are unknown), in which flowering plants, bouquets, and symmetrically arranged sprays of flowers are all given an ovoid shape and placed in staggered rows.⁷⁸ The red



Fig. 98. Fragmentary carpet with tree pattern. Northern India, Kashmir or Lahore, ca. 1650. Pashmina pile on silk foundation, 7'5½" x 6'3½" (227.3 x 191.8 cm). The Frick Collection, New York (61.10.7)



Fig. 99. Fragment of a carpet with tree-and-flower pattern (detail). Northern India, Kashmir or Lahore, ca. 1650. Wool pile on cotton and silk foundation, 6' 11" x 2' 7½" (211 x 80 cm). The Textile Museum, Washington, D.C. (R63.00.11A)

ground appears between these ovoid forms almost as a lattice, but undefined, or reserved. One might expect this rather rococo design to reflect production later than that of the carpets with straightforward flowering plants, but inventory labels on these two pieces prove they are contemporaneous with the others; both were purchased in Lahore, one in 1654, the other in 1656. A further variation on this pattern can be seen in a carpet in Jaipur in which rows of ovoid floral forms alternate with rows of secondary floral motifs.⁷⁹ Also surviving, mainly in the Jaipur Collection, are runners, or mats, with narrow borders and plants oriented to one long side.⁸⁰

Trees may also be incorporated into the flowering plant pattern. A pair of large carpets, one in the Museu Calouste Gulbenkian, Lisbon, the other in the Blau Collection, New York,⁸¹ have designs involving rows of alternating irises and vases of narcissus; each element is separated by a small cypress tree. Perhaps the designer was already familiar with the famous tree carpet (fig. 98) in the Frick

Collection, New York, in which cypresses alternate with flowering trees in just one row.⁸² The design of the Frick rug includes only trees, organized in rows, as are the flowering plants of other pieces. It was once somewhat larger, and there are many small fragments in various collections; these must have been removed when the damaged carpet was restored to a visually complete but reduced form.⁸³ Given the border proportions and the variety of tree forms on extant field fragments, Charles Grant Ellis has speculated that the field originally held seven or eight rows, each with four trees.⁸⁴ The demarcation of the rows is emphasized by the undulating landscape of rocks and tiny shrubs, a Persian convention also found in earlier Indian pictorial carpets.

The Frick rug is one of the pashmina glories of Indian weaving, but its colors have suffered from overexposure to light (the colors are better preserved in some of the small fragments). At 576 knots per square inch, its weave is not as fine as that of other pashmina rugs, but its drawing is beautiful and its design lyrical. The tree design is another instance where there are similar examples in different grades. Much coarser versions with sheep's-wool pile are known: a damaged but complete piece appeared in the London market in 1996 (fig. 99),⁸⁵ and two fragments from another carpet with this pattern are in the Textile Museum, Washington, D.C.⁸⁶

Two flower-style carpets of unusual shape were formerly in the Jaipur Collection: a circular rug now belongs to the Government Central Museum of Jaipur, and what remains of an octagonal piece is now in the Calico Museum of Textiles, Ahmadabad. The circular rug (fig. 100; cat. no. 24), whose flowering plants in field and border are oriented to be seen from outside, surely comes from the same workshop as the larger rectangular pieces and was acquired at the same time, in 1655.⁸⁷ There is a medallion-like unit at the center composed of plants with iris blossoms and S-shaped leaves arranged radially. The S-shaped leaves appear in pairs, thus forming vasselike brackets. Related S scrolls are extended into figure eights in a number of the lattice-and-flower carpets to be discussed below.

The octagonal flower-style carpet, complete when photographed for Campbell in 1929, is now fragmentary and very worn.⁸⁸ It has a medallion of a flattened circular shape. The radial flower pattern is framed by a collar related to minor border designs. The flowers in the field are arranged radially, facing out, but in this case the main border pattern is not a row of flowering plants but of scrolling vines and



Fig. 100 (cat. no. 24). Circular carpet with flower pattern (detail). Northern India, Kashmir or Lahore, ca. 1650. Government Central Museum of Jaipur, India (2227)

blossoms, reminding us that the Persian style had not been forgotten. This was a high-grade carpet, but not quite of the best quality. Wefts are all silk, and the pile is probably of pashmina, but the warps are cotton and the knot count is about 400 per square inch. The fragment that survives is full length and measures 7 feet 7 inches, so it was not a large piece. According to an inventory label, the rug was purchased in 1657.

The polygonal format is familiar to us from painted representations, although it is often difficult to judge the number of sides. There are two octagonal pavilions on the roof of Amber Fort, but, at a width of 12 feet 9 inches and 12 feet 11 inches, they are too wide for the piece just discussed, a piece probably made to order. The octagonal format may well have been based on a Persian model. We have already discussed the fragments from a polygonal pashmina carpet of the Herāt type (see fig. 90). The second Mughal emperor, Humāyūn (r. 1530–56), had a special palace for feasting, including the celebration of his accession. The Mystic

House, as it was known, was situated on the riverbank in Agra. It had a large octagonal room containing an octagonal water tank, in the middle of which was an octagonal platform covered with Persian carpets.⁸⁹ This description and perhaps the building itself may have been familiar to later Mughal emperors.

A large series of curiously shaped rugs can also be associated with the Jaipur Collection. One long side of these carpets is typically arched, as in the example in the Cincinnati Art Museum (fig. 101; cat. no. 25), or has a straight-sided indentation, as in a rug in the Museum of Fine Arts, Boston (fig. 102). The arch may be stepped or somewhat elongated, and one side projects out farther than the other, usually to a point. Campbell reported sixteen such pieces in the collection in 1929. More than half of these were gone by 1973 (three as gifts from the maharaja to the City Palace Museum). Some of the examples in Western and other Indian collections are from the Campbell group, but others, like the arched piece in Cincinnati, are not, proving that some material



Fig. 101 (cat. no. 25). Shaped carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. Cincinnati Art Museum, Gift of Mrs. Audrey Emery (1952.201)

left the collection before 1929.⁹⁰ Eight of Campbell's sixteen arched carpets had inventory labels bearing legible dates of purchase: 1654 (on two), 1658 (on three), 1660, 1661, and 1689.⁹¹ One was received in 1656.⁹² The only source named is Lahore.

Technically, the arched flower rugs make up a homogeneous subgroup. Warps are ivory cotton, and wefts are customarily off-white or beige cotton (nos. 1 and 3) and red silk (no. 2). The pile is

sheep's wool (there is no trace of pashmina in this type), with an average of about 150 knots per square inch. At least one example has cotton wefts of an apricot color.⁹³

The arched carpets seem to have been made as pairs, going by their dimensions, but the patterns of flowers never match exactly, as was the case with one rectangular pair previously noted (p. 99). Cartoons for individual flowering plants may well have



Fig. 102. Shaped carpet with flower pattern. Northern India, Kashmir or Lahore, ca. 1650. Wool pile on cotton and silk foundation, 6'3" x 15'3" (190.5 x 464.8 cm). Museum of Fine Arts, Boston, Gift of John Goellet (66.228)

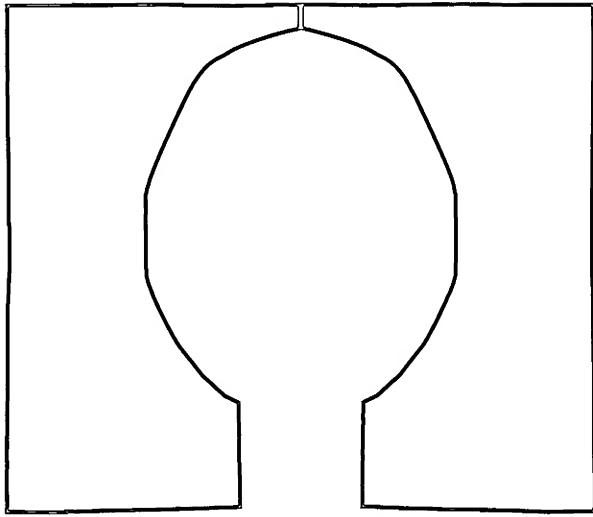


Fig. 103. Proposed configuration of a pair of shaped flower carpets

existed to aid the weavers—work from memory is certainly conceivable too—but in any case the differences in pattern between pairs indicate that an overall cartoon was not employed.

The use to which such oddly shaped carpets might have been put has long been the subject of speculation.⁹⁴ One hypothesis is that they were hung on walls to match (or even to substitute for) architectural arches, but the arches are often highly irregular in shape, and the sides, when the rug is turned this way, would seem too short. Putting a pair of arched carpets together at the long points yields an overall rectangular shape with a circular, polygonal, or somewhat elongated void inside and a narrow aisle connecting that void to the periphery of the rectangle (see fig. 103). It has been suggested that the pairs of carpets could have flanked fountains, but the orientation of the flowering plants argues against this. The flowers would only be properly viewed, in fact, by someone sitting within the void, perhaps on a throne on a raised dais, as is the case in a painting of Aurangzeb shortly after his accession (fig. 4). One speculates that the dais, too, would have had a carpet. Unfortunately, the two surviving candidates mentioned above, one circular and one octagonal, are not suitable by size or detail of design (the borders are very different).

The notion of sets of such carpets is an appealing one, but the arched pieces rarely match up well with rectangular pieces. Most arched carpets have narrow borders of scrolling vines and blossoms, a border pattern seen on only a few rectangular pieces.

Only one arched rug has a more complicated border pattern, one similar to the rectangular carpet in the Metropolitan Museum (fig. 93; cat. no. 22).⁹⁵

Rectangular carpets usually have wide borders containing a row of flowering plants, a pattern not found on any arched rug (but present in the circular flower carpet in Jaipur).

Traditional lore had it that, whether to be used on walls or floors, the flower carpets, many acquired in the 1650s or 1660s by Mīrza Raja of Amber, were obtained, indeed, presumably ordered, to furnish the royal apartments at Amber Fort. Systematic searches by various authorities have yet to discover spaces with dimensions suitable for these carpets. The most recent suggestion, more plausible but still unproved, is that the flower rugs were made to furnish tent complexes used by the Amber-Jaipur maharajas. Again, as with fixed buildings, it is difficult to envision their specific placement. Jon Thompson, citing a small octagonal tent in Jodhpur as evidence, speculates that pavilion-like tents, erected inside larger tents, may have been flanked by arched rugs.⁹⁶

Lattice-and-Flower Pattern

Elaborate field patterns were conceived involving flowering plants placed in compartments within various lattice systems. Several of these were made of pashmina in what can be considered the imperial grade. One example (fig. 104; cat. no. 26), acquired recently by a European private collection, is a nearly square piece whose lobed field compartments are defined by a leafy vine that twists and coils. The square format of this rug is not original; it was once considerably longer. Such shortening is customarily done to remove a damaged area, and indeed two stray fragments from the original field are known.⁹⁷

The plants radiate about central points marked by a yellow blossom, so they are not oriented to be seen from any particular vantage point. The border pattern consists of a broad scrolling vine to which cloud wisps are attached. Within the curvature of the reciprocal vine are clusters of blossoms. The naturalistic effect of the floral motifs is heightened through the use of color shading, particularly in the blossoms and leafy vines of the field.

Fragments of a second pashmina lattice-and-flower rug are divided between the Victoria and Albert Museum, London (fig. 105; cat. no. 27), and the Kunstmuseum Düsseldorf.⁹⁸ Here the



Fig. 104 (cat. no. 26). Pashmina carpet with pattern of lattice and flowers. Northern India, Kashmir or Lahore, ca. 1650. Private collection

flowers are arranged facing one end of the rug, each occupying an ovoid compartment formed by vertical serrated vines that scroll back and forth. The Düsseldorf fragment has attached border pieces featuring a pattern of alternating cypresses and flowering plants in a kind of landscape, but it is not certain that these border pieces belonged to the original rug.⁹⁹

The finest weave of any classical Indian carpet occurs in a badly damaged pashmina rug (fig. 7) whose tilelike lattice-and-flower pattern is now

scarcely discernible. This rug has an astonishing 2,100 knots per square inch. It stands apart too because of its small horizontal format, unusual for a rug but consistent with textiles known as *rumals*,¹⁰⁰ generally thought to be coverings for ceremonial gifts.

To our knowledge, only one pashmina carpet (fig. 106; cat. no. 28) remains in India. Once part of the Jaipur Collection, it was given to the City Palace Museum in 1959 by the maharaja. In spite of areas of damage, the pattern reads very clearly as a



Fig. 105 (cat. no. 27). Fragment of a pashmina carpet with pattern of lattice and flowers. Northern India, Kashmir or Lahore, ca. 1650. Trustees of the Victoria and Albert Museum, London (T. 403-1910)

lattice formed by thick scrolling vines that loop into figure-eight patterns and larger units that hold blossoms and vines and sprays of blossoms with clusters of leaves. The leaf clusters sprout from the vine terminals and not from the ground, so the naturalistic effect is diminished. The field pattern is also known in several standard-grade carpets in the Jaipur Collection.¹⁰¹

A pleasing variation on the lattice-and-flower theme involves bouquets of flowers (of different species) placed in vases that mark the junction points of the lattice scrolls. A large fragment of a carpet with such a motif belongs to the Victoria and Albert Museum, London (fig. 107), and smaller ones to the Los Angeles County Museum of Art and the Keir Collection, Richmond, England.¹⁰² This is another instance where wefts are red silk (no. 2) and apricot cotton (nos. 1 and 3).

A slightly later version of the lattice-and-flower type (fig. 108), almost thirty feet long, is of special

interest because its main border design, featuring palmettes and blossoms flanked by sprays of little flowers, later evolved into a standard type favored in millefleur rugs (see fig. 125). One example of that group even mimics the field pattern.¹⁰³

Lattice-and-Blossom Pattern

A more ornamental effect was achieved through various lattice patterns that involved blossoms and vines rather than whole flowering plants. Blossoms may be portrayed in a naturalistic way, with fine details and shading of colors, but the overall artistic goal was to achieve a decorative pattern more than a naturalistic effect. Lattice-and-blossom designs are found in carpets of many different grades, but the most accomplished are, as one would expect, those with pashmina pile. One version belongs to the Metropolitan Museum (figs. 109, 110; cat. no. 29). It is incomplete, consisting of two fragments, but the existence of the center point in side and end minor borders (the point where the design reverses) allows us to calculate the original dimensions of the carpet as 23 feet 7 inches by 8 feet 2 inches, an enormous size for a carpet with such a fine weave (900 knots per square inch). All the characteristics of fine pashmina carpets are present. The foundation is all silk; warps are in colored stripes, and wefts are red silk in three shoots. Painterly coloristic effects are present in the color mixing and shading found in the imaginary blossoms in the field and the grassy hillocks in the border.

The field pattern, with a lattice formed by serrated vines scrolling back and forth, is reminiscent of the lattice-and-flower rug in London (fig. 105) and Düsseldorf. Also, the distinctive landscape design of the border, featuring a row of cypresses and flowering plants growing out of little hills, repeats in a general way the design of the border fragments attached to the piece in Düsseldorf. The most extraordinary feature of the Metropolitan carpet is the arrangement of giant circular blossoms in alternate rows in the lattice. Although presented in seemingly naturalistic detail, these blossoms, with their concentric rings of petals, are truly fantastic creations. The earlier Persian-style pashmina carpet in Lisbon (fig. 74) had equally fantastic blossoms.

Another fine lattice-and-blossom carpet has large blossoms centered within diamond-shaped compartments rather than at crossing points of the



Fig. 106 (cat. no. 28). Pashmina carpet with pattern of lattice and flowers. Northern India, Kashmir or Lahore, ca. 1650. Maharaja Sawai Man Singh II Museum, Jaipur, India (C-15)

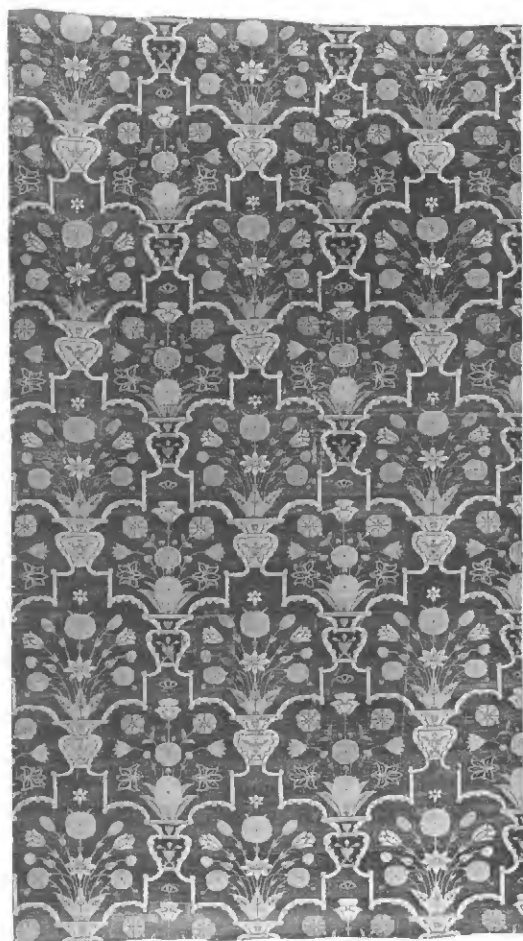


Fig. 107. Fragment of a carpet with pattern of lattice and flowers incorporating vases (detail). Northern India, Kashmir or Lahore, ca. 1650. Wool pile on cotton and silk foundation, 11'6½" x 6'4½" (351.8 x 194.3 cm). Victoria and Albert Museum, London (IM. 67-1930)

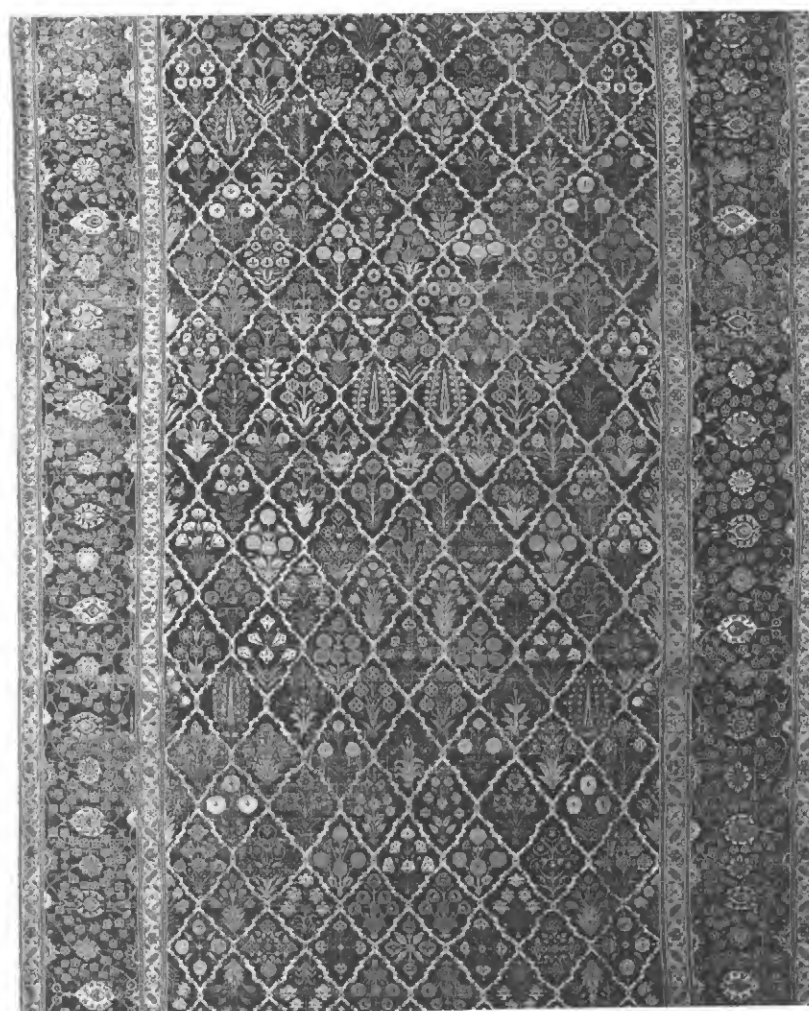


Fig. 108. Carpet with pattern of lattice and flowers (detail). Northern India, Kashmir or Lahore, second half of the 17th century. Wool pile on cotton and silk foundation, 29'9" x 16'6" (906.8 x 502.9 cm). Victoria and Albert Museum, London (IS. 244-1964)



Fig. 109 (cat. no. 29). Fragments of a pashmina carpet with pattern of lattice and blossoms. Northern India, Kashmir or Lahore, ca. 1650. The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.723)

Fig. 110 (cat. no. 29). Detail of fig. 109 (*opposite*)





Fig. 111 (cat. no. 30). Fragments of a pashmina carpet with pattern of lattice and blossoms. Northern India, Kashmir or Lahore, ca. 1650. The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.712). (Smallest fragment): The Friedsam Collection, Bequest of Michael Friedsam, 1931 (32.100.457)

lattice framework (figs. 111, 112; cat. no. 30). The Metropolitan Museum owns six fragments from this carpet, enough to permit a reconstruction of the full width of almost thirteen feet. The original length may have exceeded thirty feet. Four other fragments of this rug are known.¹⁰⁴ A final example of this pattern in pashmina survives in numerous fragments, the largest of which belongs to the Museu Calouste Gulbenkian in Lisbon (fig. 113; cat. no. 31). Both field and border are preserved, so we know which patterns belong together. The field has elongated, cartouche-shaped compartments formed by the thick vines of the lattice. Each compartment has a poppy blossom flanked by pairs of leaves and clusters of smaller blossoms. All elements are linked by a vine scroll that continues from one compartment to the next. These conventions appear in the numerous surviving versions of this type, in all levels of quality. The border has blossoms and leaves arranged within the compartments formed by a reciprocal vine-scroll pattern.

Versions of the lattice-and-blossom pattern were also woven in carpets that were less luxurious

and less finely knotted. One example (fig. 114; cat. no. 32), although reduced in length, is large—and complete—enough to provide a clear reading of the repetitious nature of the textilelike pattern, with its alternating compartment forms and groupings of poppy blossoms flanked by curved leaves. A date of manufacture in the second half of the seventeenth century is indicated by the increased stylization of the floral pattern here and also by the diminution in scale of the floral motifs relative to the size of the carpet, a tendency seen in other rugs from this period (see pp. 121ff.). A second version, quite coarsely woven, survives only in a series of damaged and restored fragments.¹⁰⁵ The chief distinction of this carpet is its size, which was estimated to be approximately 18 by 9 meters (59 by 29½ feet) when it was last seen intact in the mid-1870s.¹⁰⁶ Legend has it that the carpet was ordered by Shāh ‘Abbās for the Chihil Sutūn (Hall of Forty Columns) in Isfahan, completed in 1611, but this cannot be, for the Chihil Sutūn was not completed until 1648, and the carpet surely dates from the second half of the century, as does the carpet illustrated in figure 114.



The highly ornamentalized nature of the lattice-and-blossom pattern might suggest that it represents a later stage of evolution, a step further removed from the naturalism of the first flower-style representations. But dated monuments and works of art show that the pattern, which actually predates the advent of the flower style, became a staple of the decorative repertoire developed under Shāh Jahān, and it was in popular use at the same time as the lattice-and-flower style and the type with rows of formal plants. Imperial buildings such as the Ārāmgāh in Delhi's Red Fort (fig. 85) are adorned with the pattern, and the paintings of the 1650s, including an audience scene from the *Pādshāhnāma*,¹⁰⁷ show these carpets in use.

Attribution and Provenance

All of the flower-style rugs discussed in this section can be attributed to northern India, to Lahore or Kashmir. It is possible that all were made in Kashmir, that the place of inspiration for the flower style became the production center for its carpets

sometime between 1620 and 1640, and that the looms of Lahore, after 1640 or so, were yielding only carpets of the durbar class (whose reddish cotton wefts and partiality to light blue in the pile recall earlier Lahore pieces). Certainly Kashmir, with its pashmina shawl-weaving tradition, produced most of the pashmina rugs. Several subimperial or standard-grade carpets are so close in design and color to pashmina examples that a Kashmir origin may be inferred for them as well. Yet, at this point, it seems wise to leave open the possibility that some were woven in Lahore, given that so many of the flower rugs in Jaipur were originally purchased in Lahore or were called Lahori carpets. Also, there are strong similarities in weave and color between standard-grade carpets in the flower style and Persian-style carpets attributed to Lahore. Pashmina carpets in the Persian style are also attributed to Kashmir or Lahore, but the blue-ground fragments with scrolling vines and animal heads (figs. 66–68) are assigned to Lahore since they were made before the royal factory was established in Kashmir.



Fig. 112 (cat. no. 30). Detail of
fig. 111 (*opposite*)



Fig. 113 (cat. no. 31). Fragment of a
pashmina carpet with pattern of
lattice and blossoms. Northern
India, Kashmir or Lahore, ca. 1650.
Museu Calouste Gulbenkian,
Calouste Gulbenkian Foundation,
Lisbon (T 60)



Fig. 114 (cat. no. 32). Carpet with pattern of lattice and blossoms. Northern India, Kashmir or Lahore, second half of the 17th century.
Private collection

Fig. 115. *Raja Dip Chand of Bilaspur Listening to Singers*. Punjab Hills, Bilaspur, ca. 1660. Opaque watercolor on paper. Victoria and Albert Museum, London (IS. 120-1954)



It is tempting to associate all flower carpets with the Jaipur Collection because so many can be traced from that source. Although the Jaipur rajas may have been the main clients, at least for the arched rugs, there is ample evidence that such carpets were used at the Mughal court and at provincial courts as well. In addition to the audience scene from the *Pādshāhnāma* (see p. 113), a Mughal painting of about 1660 shows the very young emperor Aurangzeb holding audience as his throne rests upon a flower carpet (fig. 4). In another painting of about the same date, from Bilaspur in the Punjab Hills, the raja sits upon a carpet with a lattice-and-flower pattern, evidence that Mughal taste influenced local courts very quickly or that Mughal carpets were being acquired by local rulers (fig. 115). It is unlikely that Jaipur was the only royal collection to contain such carpets; although evidence is lacking, one suspects that Bikaner, Jodhpur, and Rampur at one time had similar material in their stores.

So far in this discussion, the artistic dialogue between Iran and India has been dominated by Iran, but the Mughal flower style had an impact on Safavid art around the middle of the seventeenth century. Neatly arranged rows of flowering plants and trees, more formal and conventionalized than their Indian counterparts but at the same time more naturalistic than earlier Persian flower representations, can be seen, for example, in several wall paintings in the Chihil Sutūn in Isfahan and in several so-called vase carpets.¹⁰⁸

LATER CARPET TYPES

Many of the carpet patterns favored under Shāh Jahān continued to be popular under Aurangzeb (r. 1658–1707) and his successors in the eighteenth century. It is not certain that any of the looms were still part of the imperial household; the factories may by then have been strictly private or commercial in nature. In any case, this was the period in which provincial carpet weaving came to the fore. Versions of the flower style were produced in the north and also in the Deccan, the plateau of south-central India. The popularity of the Persian style waned in the north but endured in the south. A certain conservatism in Deccani carpet weaving is implied in the virtual abandonment of the Persian style in the decoration of other objects fashioned in the Deccan, for example, textiles (fig. 116) and metalwork (fig. 117), despite the contemporaneous production of carpets still bearing patterns of scrolling vines and blossoms. This conservatism may be due to the Persian origins of the carpet weavers there or it may relate to the Kyoto tradition of having Deccani copies made to replace older rugs (see p. 138).

During the period from Aurangzeb's accession in 1658 to about 1800, various tendencies can be seen in artistic decoration, of carpets and of other media as well, and in the choice of materials. The clarity and even the simplicity of patterns popular during the reigns of Jahāngīr and Shāh Jahān were superseded



by a taste for fussier and busier ornamentation. Drawing became stiffer, although this impression is partially due, as before, to different levels of quality. Pashmina continued to be used in the north in carpets of the highest grade, but silk became the luxury material of choice during this period in the Deccan plateau.

Durbar (Audience) Type

We have already seen a number of very large carpets, 30 feet or more in length. A surprisingly high percentage of carpets manufactured during Akbar's time were enormous, even though these represent the earliest works of court production and in some ways must be seen as experimental. The carpet thought to be the oldest surviving Indian piece, the fantastic-animal carpet (figs. 21, 22), might have been a single work of about 65 feet in length, although it is more likely that it represents parts of two carpets, each about 32 feet long (see pp. 33, 35). Huge carpets were also made during Jahāngīr's reign: the Morgan Persian-style carpet in the Metropolitan (fig. 54), for example, at 30 feet 3 inches and the Gulbenkian medallion carpet (fig. 56) at 23 feet 2½ inches. Paintings showing the emperors in audience (*durbar*), particularly Jahāngīr and Shāh Jahān, often depict vast carpets placed longitudinally before the throne, so they were certainly used on these occasions in the palaces (figs. 2, 3).

Enormous carpets, some exceeding 60 feet in length, were in demand during the second half of the seventeenth century. Some were even made in pairs. Most of these very large works are in the Jaipur Collection, and several have inventory labels indicating that they were purchased in Lahore in 1656.¹⁰⁹ The largest pair, at a length of 63 feet 3 inches, has a fascinating combination of motifs and patterns (fig. 118).¹¹⁰ The field has a central rectangular zone containing a full medallion with serrated edges and four quarter medallions. Floral decoration saturates this zone; with its palmettes, blossoms, and vines, it recalls the Persian style but is very Indian in its lushness. The end thirds of the field are marked off with rows of squares containing flowering trees—cypress, palm, and ones with “weeping” branches—oriented to be viewed from the ends of the carpet. This pattern is perhaps based on the formal squares of the Persian garden, or *chahār bāgh*, and in fact the most famous carpet with a variation of this design was among the first to be inventoried in the Jaipur Collection,¹¹¹ although



Fig. 116. Fragment of a floor cover (detail). The Deccan, probably Burhanpur, late 17th or early 18th century. Cotton, resist-dyed. The Metropolitan Museum of Art, New York; The Alice and Nasli Heeramaneck Collection, Gift of Alice Heeramaneck, 1982 (1982.239a)



Fig. 117. Huqqa base. The Deccan, Bidar, last quarter of the 17th century. Alloy inlaid with brass. The Metropolitan Museum of Art, New York; Louis E. and Theresa S. Seley Purchase Fund for Islamic Art and Rogers Fund, 1984 (1984.221)

the effect is quite different. The main border bears an unusual continuous colormade pattern, with large capitals surmounting the double columns. Each niche contains more flowering trees.

One pair has a similar field pattern but a main border consisting of small diamond-shaped compartments of varying ground color, a pattern probably based ultimately on the interlocking compartment design of some Herāt-type rugs.¹¹²

One pair has a field pattern with Persian-style floral motifs, which, however, look very Indian, and another pair is similar but with brackets incorporated into the design.¹³

These carpets are related to other northern Indian types, but we are unable to pinpoint production to Lahore, Kashmir, or perhaps even Multan (but see discussion on pp. 12, 14). One must remember that Lahore was the point of purchase but not necessarily of manufacture. Warps are of multi-ply white cotton, with as many as 10 or 12 strands, and wefts are of rust or orange cotton. The weaving is quite coarse, at about 60 knots per square inch. The palette is not unlike other northern Indian pieces, with cherry red and ocher and mint green, but there is a heavier use of pink, which gives the carpets a rosy appearance. The pile has a somewhat shaggy look, partly because it is longer than that of other types but also because the packing is loose, allowing the pile to lie flat. This group also seems distinctive for its blend of Persian and Hindu motifs and styles. A number of carpets of more modest size, mostly in the Jaipur Collection, also share these features.

The original function of these gigantic carpets is not specifically known, but they were surely used for audiences or other ceremonial occasions in Amber Fort. They have little similarity to flower-style carpets in either design or technical characteristics, but there are certain parallels. There are, for example, three oddly shaped arched carpets in the Calico Museum of Textiles, Ahmadabad, formerly in Jaipur, which may be from the same workshop as the durbar carpets.¹⁴ What little pile has survived the ravages of local vermin shows that the floral pattern of the field and the geometric design of the border have nothing to do with the arched carpets in the flower style, but the shape, although exaggerated in width and multilobed, certainly does. One was purchased in 1660,¹⁵ so the two types of arched rugs are virtually contemporaneous. But it is very difficult to imagine these shaped carpets, singly or in pairs, adjacent to a platform or dais. Ultimately, the function of these carpets is as mysterious as that of the shaped carpets in the flower style.

One audience carpet, 52 feet 4 inches in length (figs. 119, 120; cat. no. 33), stands apart from the others. It is less shaggy and much finer, with a knot count of about 200 per inch, and its peculiar pattern, unknown in any other Indian carpet, draws from various sources, mostly Persian. From Persian vase carpets come the three superimposed lattice systems incorporating palmettes and vases; certain

lobed medallion forms with broad collars are derived from northwest Persian medallion carpets (one "medallion" seems to be a whole rug, a rectangle with medallion, field, and borders); from Indo-Persian carpets come particular palmette types. Various square, lobed, and ovoid medallions are arranged throughout the field in staggered fashion; many are ornamented with small-scale geometric patterns and stripes, perhaps suggesting an awareness of Anatolian or Mamluk weaves. The main border consists of lobed medallions containing flowers and arabesques, set against a light blue background. The coloring is distinctive, with warm hues and an abundance of orange.

The carpet has been attributed recently to the Deccan, with emphasis given to the frequent appearance of fish and the use of a band of multilobed medallions, both features of Deccani ornament.¹⁶ Even in the absence of other large-scale carpet weaving in that region, the attribution is endorsed here on the basis of features found in other carpets attributed to the Deccan. Three-strand warps are in contrast to northern pieces, which invariably have six or more. Furthermore, Deccani weavers seem to have been prone to heavy borrowing, even copying, particularly from Persian carpets. As an act of imagination, this carpet is hard to match. The carpet is here dated to the second half of the seventeenth century, the period of greatest demand for such enormous weavings.

Millefleur

A sizable group of carpets woven in the north—in Kashmir and perhaps in Lahore as well—throughout the second half of the seventeenth and the eighteenth century are known as millefleur carpets because the strictly floral patterns incorporate a profusion of tiny blossoms, often clustered together in groups of three, five, or seven. Millefleur carpets can be divided into two main pattern types: those with repeating pattern units of small-scale floral elements and those with small-scale floral elements growing out of a hillock or vase to fill a field whose upper zone is defined by an arch. The repeat-pattern carpets are not directional in nature, whereas the niche rugs are. The repeat-pattern rugs will be discussed first since they fall into three subgroups whose production covers the full range of the 150-year period; the niche rugs make up a more homogeneous group that falls essentially into the last segment of the chronology.

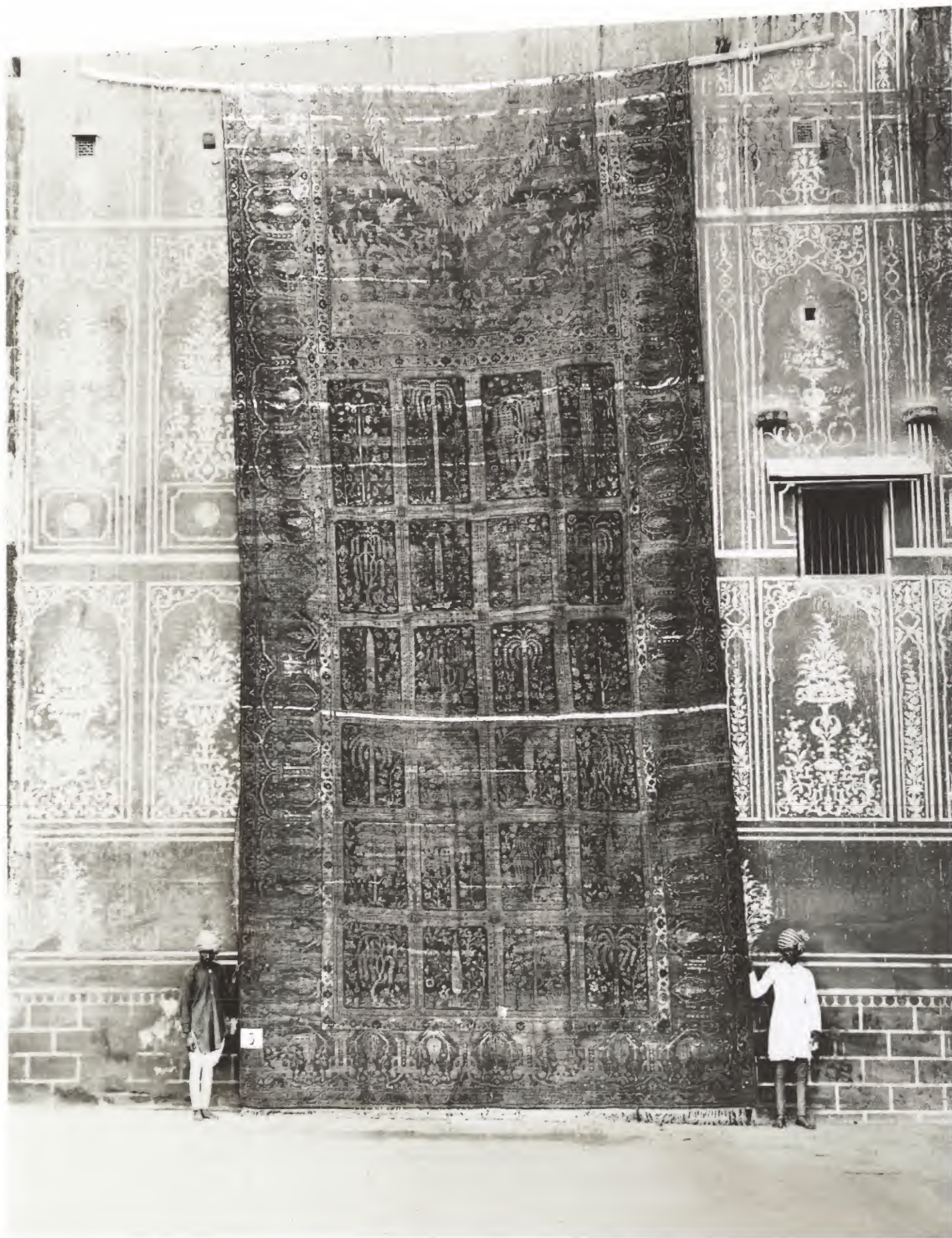


Fig. 118. Durbar carpet with medallion and garden design. Northern India, ca. 1650. Wool pile on cotton foundation, 63'3" x 15'7" (1927.9 x 475 cm). Collection of the maharaja of Jaipur, India

The millefleur style developed from European influences on Mughal floral patterns combined with a trend toward reducing the scale of ornamental elements. From the European aspect came certain motifs such as brackets and acanthus and serrated leaf forms (also, some of the lattice types already seen). These motifs had been introduced much earlier, evident in a carpet depicted in a painting, *Jahāngīr Preferring a Sufi Shaikh to Kings*, executed about 1615–20 by the artist Bichitr (fig. 121). Under the royal throne lies a fantastic carpet that incorporates European design elements, including grotesques. The floral elements are relatively small in scale and are clustered in pattern units that repeat, in reverse, across the length and breadth of the field. Such a carpet existed only in the mind of the painter (or on paper), but it shows the kinds of influences that would affect patterns then and in later times.

Some carpets manufactured during Shāh Jahān's reign contain these motifs, particularly durbar carpets purchased in the 1650s. Brackets and serrated leaf forms are routinely found in these pieces. It is interesting to note that the grouping of small-scale floral elements in repeating pattern units finds a parallel in Indo-Persian carpets made in Iran during the period of about 1660–80.¹¹⁷ These might have been simultaneous developments, or perhaps the Persian model influenced what happened in India at this time or slightly later; we have seen numerous other instances of Persian influence on carpet design, and Persian carpets were still esteemed in India.

The earliest group of millefleur carpets can be assigned to the reign of Aurangzeb, although they are not necessarily the result of his patronage. One example is of special interest because it is one of the few surviving pashmina rugs with a flower-style pattern (fig. 122). Staggered rows of white-blossomed plants with twisted leaves fill the field, and intermediate and smaller versions occupy the remaining spaces around the edges. The stiffness of the drawing and the compression, or crowding, of the pattern elements are indicative of post-Shāh Jahān manufacture. With silk warps arranged in colored stripes (red, ivory, yellow, and blue-green) and the fine weave of about 800 knots per square inch, this rug undoubtedly comes from one of the same workshops as earlier pashmina pieces. The rug survives in two fragmentary pieces.¹¹⁸ The border pattern is the key to this first group. It consists of lotus blossoms and pods systematically arranged and connected by vine scrolls. Bands of lotus plants occur frequently in the lower zone of Rajput and

northern Deccani painting of the second half of the seventeenth century and become rather conventionalized in their decorative form.

Several other carpets with the lotus border are probably roughly contemporaneous with the fragmentary flower-style rug. All have deep red fields, dark blue or blue-green borders, and white minor borders. A splendid example in the Ashmolean Museum, Oxford (fig. 123; cat. no. 34), has a field pattern similar to others in the group. Diverse palmettes, leaves, and blossoms—some clustered into little floral sprays—are connected by scrolling vines in small pattern units that repeat seven times, reversed, over the length and five times over the width of this small rug (6 feet 10¾ inches by 4 feet 10 inches). The scale of the individual elements is necessarily diminutive. A similar pattern, but with shelflike brackets incorporated, fills the field of a rug said to have been acquired in Bengal in the late eighteenth or early nineteenth century by a former East India Company official.¹¹⁹ A third version, once belonging to the dealer Arthur U. Dilley, involves brackets and long leaves arranged to form elongated vertical compartments for the floral sprays.¹²⁰

Very similar carpets were woven in less fine grades, just as had been done (probably at the same workshop) under Shāh Jahān. Two examples in the Metropolitan Museum¹²¹ have identical patterns: many of the same floral devices plus repeating rows of twisted, serrated leaves assembled in the form of medallions. The general crowding of elements and lack of clarity in differentiating pattern units distinguish the standard-grade carpets from those with pashmina pile, perhaps suggesting a slightly later date, in the early eighteenth century.

The second millefleur group is a small one, only two pieces, and represents another transitional stage between Shāh Jahān's pashmina rugs and the last, most numerous, millefleur type. Both are fine pashmina rugs of the traditional sort, with striped silk warp groups, and both have field patterns derived from Shāh Jahān lattice forms. A date of manufacture in the first half of the eighteenth century can be proposed. The carpet in the Museum für Kunst und Gewerbe, Hamburg (fig. 124), has the finer weave of the two, with about 1,000 knots per square inch.¹²² The diamond lattice is very rococo in style, with twisting vines attached to rings at the corners and gently interlocked at the midpoint of each side. Each compartment contains a flowering plant; the two varieties are arranged in diagonal rows.

74



Fig. 119 (cat. no. 33). Durbar carpet with medallion design. The Deccan, second half of the 17th century. Private collection

Fig. 120 (cat. no. 33). Detail of fig. 119 (*opposite*)





Fig. 121. Bichitr. *Jahāngīr Preferring a Sufi Shaikh to Kings* (detail). Opaque watercolor and gold on paper. From the St. Petersburg Album. Mughal, ca. 1615–20. Freer Gallery of Art, Smithsonian Institution, Washington, D.C. (42.15)

The other rug in this small group, in the Textile Museum, Washington, D.C., has about 700 knots per square inch.¹²³ The field pattern has an intricate lattice formed from quadripartite compartments containing blossoms and leaves placed radially about a central blossom flanked by brackets. The stems of the lattice are knotted and twisted and full of little extensions and projections. The main border of each carpet has a pattern in the millefleur style, with myriad tiny blossoms growing from vine scrolls. A good precedent for this development in border designs—the proliferation and clustering of small flower heads—may be observed in an earlier lattice-and-flower carpet (see fig. 108).

The third group of millefleur rugs featuring repeating patterns in the field would seem to be the last in the sequence of development. These pieces probably date from the second half of the eighteenth century. The pile is pashmina in pieces directly examined, but even then the foundation is not necessarily silk: some rugs have mixed silk and cotton or all-cotton foundations.¹²⁴ The weave averages about 150 knots per square inch. Several carpets have wefts of blue cotton, an indicator of relatively late production in India.¹²⁵ Field patterns vary but are characterized by stiff drawing and extremely

dense packing of tiny floral motifs. Design variations include repeated pattern units,¹²⁶ repeated pattern units with little medallions (fig. 125),¹²⁷ and lattice patterns,¹²⁸ among others.

There are design parallels between the latest millefleur rugs and Kashmir shawls and hangings dating from about 1800.¹²⁹ A painting of about 1820 shows a carpet of the millefleur type (unmistakable because of the clusters of little blossoms), but the carpet might not have been brand-new (fig. 126).¹³⁰ The end date for the type would seem to be about 1800, for that is when northern Indian carpets became even more pronounced in their shawl-like patterns and began to incorporate the leaf-shaped forms known as *boteh*, so popular in the shawls, in their patterns. Even at this late date, the traditional striped silk warp groups persist, although some of the colors—purple, dark brown—have not been observed before in carpets.¹³¹

The second millefleur pattern type involves a directional design of a niche filled with a profusion of tiny blossoms growing out of a hillock or vase at the bottom of the field. About a dozen examples are known, and most of them have various points in common with the last group of the repeat-pattern type; border patterns, colors, materials, weave, and



Fig. 122. Fragmentary carpet with flower pattern. Northern India, Kashmir or Lahore, second half of the 17th century. Pashmina pile on silk foundation, 5' 8" x 5' (172.7 x 152.4 cm). Collection Paul Nels, London



Fig. 123 (cat. no. 34). Pashmina carpet with millefleur pattern. Northern India, Kashmir or Lahore, second half of the 17th century. Ashmolean Museum, Oxford (EA 1975.17)



Fig. 124. Carpet with pattern of lattice and flowers. Northern India, Kashmir, first half of the 18th century. Pashmina pile on silk foundation, 6'2" x 4'9" (187.9 x 144.8 cm). Museum für Kunst und Gewerbe, Hamburg (inv. no. 1961.27)

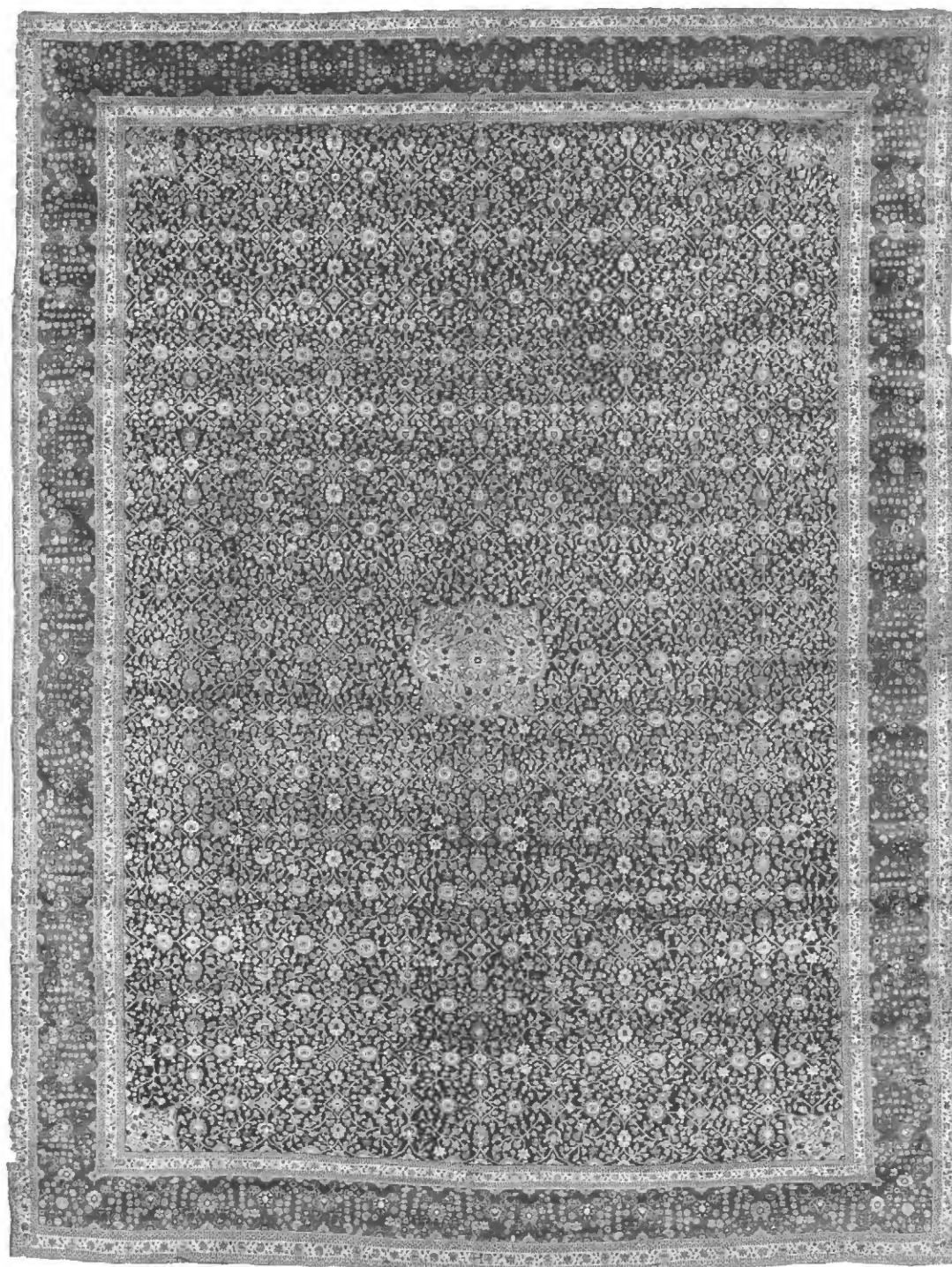


Fig. 125. Millefleur carpet with small medallions. Northern India, Kashmir, second half of the 18th century. Pashmina pile on cotton and silk foundation, 8'3" x 6'1" (251.5 x 185.4 cm). The Textile Museum, Washington, D.C., Gift of Joseph V. McMullan (1969.52.1)

certain field motifs are identical or similar. On the whole, then, the niche type can also be dated to the second half of the eighteenth century.¹³² As to the issue of their presumed function as prayer rugs, the millefleur niche rugs are no more likely to have been intended for or used in that capacity than were the pashmina niche-and-flower rugs of Shāh Jahān's time. It seems likely that the millefleur type

was also utilized in a decorative way on the floor or as hangings, as were contemporaneous textiles from Kashmir (fig. 127), which were not sturdy enough for functions of prayer.

Two millefleur niche rugs, by virtue of the relative clarity of their designs, seem earlier than the rest.¹³³ These pieces are in the Österreichisches Museum für Angewandte Kunst, Vienna (fig. 128; cat. no. 35)

and in the Arthur M. Sackler Museum, Harvard University.¹³⁴ The Vienna rug retains a degree of naturalism in its representation despite the transformation of the field blossoms into an abundant bouquet of many species growing from a single stem and base. The system of branches is clearly defined and has not yet become schematized and turned into a purely decorative pattern. The cypresses flanking the field are also relatively naturalistic. The flowering plant grows from an undulating hillock against which appears a row of formal flowering plants in silhouette. The Harvard rug has a composite flowering plant sprouting from a vase standing in a shallow footed dish. A degree of schematization has set in, and naturalistic effects have been abandoned. A date in the first half of the eighteenth century for the Vienna rug and a mid-century date for the Harvard piece seem appropriate. Both rugs have pashmina pile and all-silk foundations, with warps of colored stripes; the Vienna rug has 380 knots per square inch, the Cambridge piece just under 300, so these are not unusually fine weaves given the luxury materials utilized.

Among the main group of millefleur niche rugs, the McMullan piece in the Metropolitan Museum (fig. 129; cat. no. 36) is a typical but particularly attractive example. Main elements of the field pattern basically repeat the Harvard rug, but blossom clusters are highly regularized and arranged in a stiff schematic pattern. The lower end of the field no longer bears any resemblance to a landscape, but it has been given its own “spandrel” to balance the top of the field while retaining the basic niche format. Despite the degradation of design and the further departure from naturalism, this is a very fine rug, as are some of the others. It has pashmina pile in a fine weave of about 700 knots per square inch, considerably finer than the Vienna or Harvard rugs, despite an all-cotton foundation. The inclusion of

some blue cotton wefts, especially at the ends, supports the late-eighteenth-century dating and is a feature of several other pieces of this class.

The earliest pieces of the millefleur type, those dating from the second half of the seventeenth century, may have been manufactured in Kashmir or Lahore, like the pashmina carpets of Shāh Jahān’s time. Given the decline of Lahore, due at least in part to imperial neglect, it seems unlikely that such high-grade production was maintained there, so late millefleur rugs have been attributed just to Kashmir.

Multiple-Niche Prayer Type (Saph)

Two major carpet-weaving regions seem to have been active in India during the late seventeenth and the eighteenth century. One was in northern India—Kashmir, Lahore, and perhaps Multan—where the millefleur carpets and some later flower-style pieces were manufactured. The other center was the Deccan, the great south-central plateau area, home to various Muslim sultanates over several centuries and for long a real obsession of the Mughal emperors because of its fabled wealth. The annexation of the vast area of the Deccan to Mughal territory was finally completed by Aurangzeb in 1687, only to be lost again just thirty-five years later as Mughal central authority waned. The kingdom of Hyderabad lasted, under the rule of the Muslim nizams, from 1722 until it was finally absorbed into the Indian state in 1950.

The Deccan has long been known for its weaving. Justly famed are the painted, printed, and resist-dyed cotton chintzes of Burhanpur and Golconda and the brocades of silk and gold or silver of Aurangabad and Paithan. Cotton flat weaves (dhurries) were made in the form of multiple-niche prayer carpets (*saphs*) for use in mosques. As noted previously, pile carpets were made in Ellore in the



Fig. 126. *Nautch Party in a European Mansion* (detail). Delhi, ca. 1820. Opaque watercolor on paper. Victoria and Albert Museum, London (IS. 9-1955)

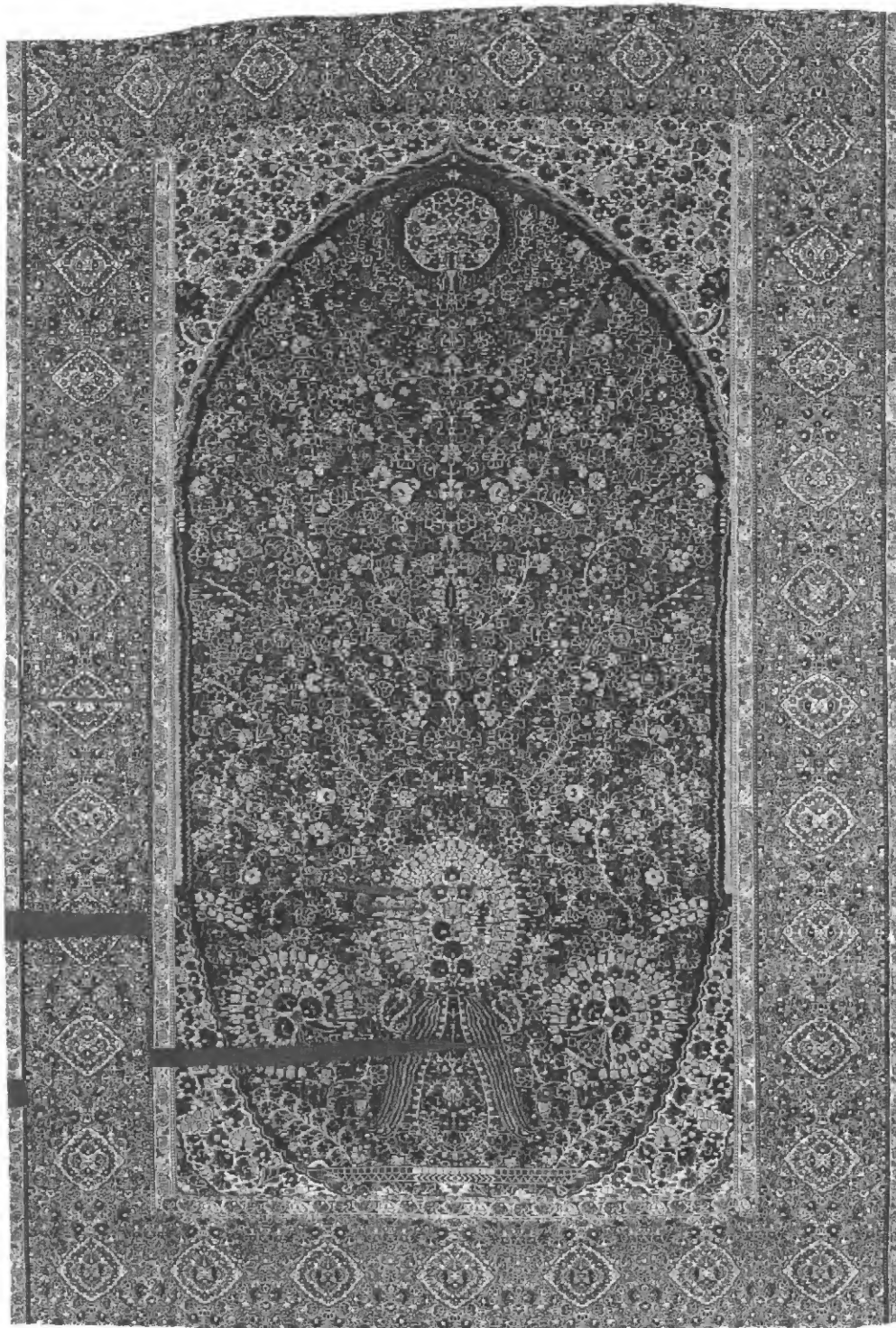


Fig. 127. Hanging in the millefleur style. Northern India, Kashmir, ca. 1800. Pashmina, twill-tapestry weave. The Metropolitan Museum of Art, New York; Rogers Fund, 1917 (17.123.3)

Fig. 128 (cat. no. 35). Pashmina carpet with niche-and-millefleur pattern. Northern India, Kashmir, first half of the 18th century. Österreichisches Museum für Angewandte Kunst, Vienna (T-1539)





seventeenth century and, later records show, in Masulipatnam and Warangal.¹³⁵ A number of nineteenth-century pieces can in fact be linked to those centers. Only recently has a serious attempt been made to identify Deccani carpet production prior to 1800.¹³⁶

Just as there were *dhurrie saphs*, so were there pile carpets woven in multiple-niche form for the mosques of the Deccan. These survive in two varieties. One type features a continuous row of niches defined by columns with pronounced bowl-shaped capitals. The largest piece with this pattern, in a private collection, has a single row of seven niches (figs. 130, 131; cat. no. 37). There are also carpets (a pair) with three niches each as well as an incomplete rug with six and two-thirds niches.¹³⁷ In its complete form the latter would have been larger than the illustrated rug, which is 18 feet 1 inch in length, even if it had only seven niches, and it might have had more. Because of the lateral orientation of the niches, all were woven with the pattern sideways on the loom.

There is little variation among these rugs either in pattern or coloring—all have a deep red ground in all niches and spandrels and a yellow main border. Perhaps these rugs were made as a set. The flower style is evoked by the two types of flowering plants or trees—one with pomegranates—that alternately fill the deeply lobed niches, whose points are capped by little lotus finials. The drawing is stiff and geometrized, and even the vine scrolls of the border possess an angularity of line. In the spandrel above each column is a shield-shaped motif reminiscent of the finial of the Shi'ite ceremonial standard, or *'alam*, but a more probable origin is the distinctive lotus palmette of similar shape found in certain Indo-Persian carpets.¹³⁸ Guard stripes have patterns of geometrized S's end-to-end and vine scrolls and heart-shaped devices.

The second group of Deccani *saphs* consists solely of fragments or rugs reduced in size, and, although they are very similar, there is enough variation in pattern, color, and material to show that they come from several separate carpets. One large fragment with a single row of six niches, from the Wolf Collection, New York (figs. 132, 133; cat. no. 38), is

characteristic. Each niche occupies its own self-contained rectangle framed by a narrow continuous border of scrolling vines and leaves with blossoms, all against a white ground. This border is flanked by pairs of guard stripes, including one with geometric end-to-end S's. Supported by columns at the outer edge of the field, each niche head comes to a sharp point without lobes and is capped by a lotus finial. The spandrels contain pairs of large rosettes. Monotony is avoided most effectively through the variation of pattern and ground color in spandrels and field. Designs include scrolling vines and blossoms, geometrized grids of small-scale blossoms, rippled water patterns, lattice patterns, and even rows of flowering plants.

A carpet recently seen in the trade retains its main border framing all the rectangular fields and lesser borders, a reciprocal trefoil design in dull red and pale olive green.¹³⁹ Although the seemingly pieced outer border indicates that the carpet was once larger, the internal arrangement of two rows of niches seems correct. Such an arrangement of "stacked" rows was simple to execute when each niche was given a discrete zone, whereas the continuous colonnade of the first Deccani *saph* type made this unworkable. This carpet, the Wolf piece, and a seven-niche *saph* in the Textile Museum, Washington, D.C.,¹⁴⁰ are so similar in every detail that they probably were once part of the same carpet or at least the same set of mosque furnishings. The arrangement of internal borders on these pieces is similar to the incomplete borders of the much earlier pashmina niche rug in the Carmen Thyssen-Bornemisza Collection (fig. 92); it is thus the one surviving seventeenth-century niche rug that might have been part of a multiple-niche carpet, either a *saph* or a *qanāt*.

Several fragments have a much narrower repertoire of color, and their patterns consist mainly of highly schematized, lacy arrangements of angular vines and leaves, which suggests a slightly later date of production (but still in the eighteenth century). One of these, in the Philadelphia Museum of Art,¹⁴¹ surprises us with a pile primarily of cotton, a material that is seen, however, in the pile of other rugs made in the Deccan.¹⁴² All other *saph* carpets and fragments of both Deccani types have wool pile on a cotton foundation, with knots ranging from 75 to 100 per square inch. It is interesting to note that all pieces examined have cotton warps consisting of either three or, more usually, four yarns. This accords well with standard Persian practice, perhaps reflecting the Persian origins of some of the area's

Fig. 129 (cat. no. 36). Pashmina carpet with niche-and-millefleur pattern. Northern India, Kashmir, second half of the 18th century. The Metropolitan Museum of Art, New York; Gift of Joseph V. McMullan, 1970 (1970.302.7)



Fig. 130 (cat. no. 37). Multiple-niche prayer carpet (*saph*). The Deccan, probably Warangal, 18th century. Private collection

Fig. 131 (cat. no. 37). Detail of fig. 130 (*opposite, below*)

weavers. In contrast, northern Indian carpets generally have six to as many as twelve warp yarns.

The reader might wonder why these Deccani carpets, some with flowers in the niches, should be considered prayer rugs when most of the single-niche rugs made during Shāh Jahān's reign are not (see p. 95). For one thing, the Deccani carpets have multiple niches. These could be part of a *qanāt*, or tent screen, but only as a single row. The survival of one piece with "stacked" rows rules this out, so use as a *saph* is most likely. Secondly, at least one of the Deccani pieces shows considerable wear in the lower part of the niche areas, where knees would have rested during prayer. Mosques in the Deccan must often have been furnished with *saphs*, based on surviving flat-woven cotton versions that were made locally,¹⁴³ and it is logical that some of them would have been pile-woven. It also seems that the rows of niches presented by *saphs* on the floor of the covered hall of the mosque were in some cases extended for congregational prayer by *saph* patterns carved in the stone floor outside the prayer hall (fig. 134). The carved niche outlines closely parallel the carpet niches in their shape and proportions and also in the two rosettes in the spandrels.

The attribution of these rugs to the Deccan is based on similarities to other, sometimes later,

pieces known or believed to have been acquired or woven there. A *saph* fragment close to the Wolf type, acquired early in this century by the Victoria and Albert Museum, London, was said to have come from the collection of the nizām of Hyderabad and to have been woven at Warangal.¹⁴⁴ Two other rugs in the stores of the Victoria and Albert are thought to have been woven at Warangal, and they have many similarities in color and pattern, particularly in details, to the *saphs*. One has a dark brown ground patterned with rather angular scrolling vines and blossoms, and the other has sparsely placed, stiff flowering plants on a white ground.¹⁴⁵ Both patterns have close counterparts in various *saph* niche fields.

In sum, this entire group, whether *saphs* or not, is from the Deccan, probably Warangal. Some of the features that recur include the use of colors unusual in the north, such as soft pink, orange, beige, pale green, and golden yellow; a granular appearance to the pattern and the frequent use of white outlining; a preference for designs involving stiff, angular vine scrolls in a repeat pattern based on Persian models; minor border patterns of angular vine scrolls and leaves in green with red and pink blossoms on a white ground; guard bands of geometrized end-to-end S's and reciprocal vines with hearts; and corner solutions for main border patterns involving





diagonal “seams” at the meeting points of perpendicular bands. An ingenious suggestion was made by Charles Grant Ellis that the diagonal corner solution was based on the actual diagonal seams of joined velvets.¹⁴⁶

The Kyoto Group

Within just the last decade or so, specialists have become aware of an intriguing collection of Oriental carpets in the Gion Matsuri Preservation Associations in Kyoto.¹⁴⁷ The carpets do not form a single homogeneous group. There are seven classical Persian rugs of the Polonaise, Herāt, and Indo-Persian types; three seventeenth-century Indian rugs (see pp. 20, 66 for two); three nineteenth-century Turkish or Caucasian pieces; and nineteen rugs in a Chinese style of uncertain origin, perhaps from a Chinese frontier area such as Mongolia. Of particular interest here is a fascinating group of twenty-three rugs that share features of color, weave, and certain minor pattern details but exhibit a variety of patterns overall. Inventory or acquisition information that survives for some of the Kyoto rugs suggests that the group dates essentially from the eighteenth century, even though an earlier date might be expected for certain patterns.

Some patterns are Persian in origin, based on symmetrical or at least regularly spaced arrangements of blossoms and palmettes connected by a scrolling-vine network. A fine example belongs to Kanko-boko (fig. 135; cat. no. 39), the association that, records show, purchased the rug in 1773.¹⁴⁸ Too long (11 feet 6 inches) for vertical display on

the association float (see fig. 60 for a typical float), the carpet was cut in two, and the halves were mounted for display on opposite sides. The field pattern consists of a rather stiffly drawn lattice network of vine scrolls linking palmettes and blossoms in pattern units that repeat in staggered rows across the width and length of the field and, implicitly, beyond. In the main border, against a black ground, various floral motifs—rosettes, palmettes, and spotted bulblike blossoms—are arranged, each angled diagonally, in a row connected by a meandering vine scroll. Guard bands are patterned with end-to-end S's against a white ground.

Variations of all these patterns can be found in seventeenth-century Indo-Persian and northern Indian carpets, but the Kyoto carpet should not be confused with either of those types. Although it has



Fig. 134. *Saph* pattern in the stone courtyard of the Jāmī Mosque, Hyderabad, completed in 1597



Fig. 132 (cat. no. 38). Multiple-niche prayer carpet (*saph*). The Deccan, probably Warangal, 18th century. The Marshall and Marilyn R. Wolf Collection, New York

Fig. 133 (cat. no. 38). Detail of fig. 132 (*below*)



many technical features in common with carpets of the Indo-Persian class (warp, weft, and pile materials and construction), it also has features that readily distinguish it. The red ground of the field is worn more than the other colors, exposing much of the nubby cotton foundation. Black and white are used prominently, particularly as outlines for motifs and as ground colors in the border. Olive green and mustard yellow stand out as colors not found in northern Indian or Indo-Persian rugs. The surface of the rug has a distinctly granular appearance.

Several other carpets in the Kyoto group have patterns in the flower style. A carpet in another association, Kita-Kannon-yama (fig. 136; cat. no. 40), acquired in 1752,¹⁴⁹ has a stiff flower-and-lattice design—consistent with a late Mughal date—and a white-ground border. Another piece, in Minami-Kannon-yama (fig. 137; cat. no. 41), has a decorative blossom-and-lattice pattern derived from the more formal versions made under Shāh Jahān and Aurangzeb. This rug is mentioned in documents dated 1814, so it was acquired before then.¹⁵⁰ Several very similar pieces were in the Jaipur Collection, but unfortunately none has inventory information on labels or in registers.¹⁵¹

Some of the Kyoto carpets have unexpected patterns, that is, unexpected in rugs with these technical features. Two have medallion designs associated with seventeenth-century Persian types; one of these was acquired in 1754.¹⁵² Another has pairs of large serrated lancet leaves,¹⁵³ a pattern that goes back ultimately to the Persian vase type, but the model was surely a seventeenth-century Indian version of the pattern. A northern Indian carpet with this design belongs to Knole, the English country house of the Sackville-West family, and the pattern appears again in a Deccani painting of about 1680.¹⁵⁴ A most unusual carpet has a Mamluk or Anatolian design of a type otherwise lost, in which a central rosette or medallion occupies an octagon within a square, bound at the ends by rows of smaller squares containing versions of the central motif (fig. 138).¹⁵⁵ The pattern here relates to fifteenth-century Anatolian carpets known as large-pattern Holbeins, but the coloring, with green and yellow predominant, is more Mamluk Egyptian than Anatolian (or Indian either, for that matter). One explanation for the use of an atypical and unfamiliar color scheme is that the carpet was made to order as a copy of the worn original whose place it was intended to take on the float, a system still in use today.¹⁵⁶ One may speculate here that the original was a carpet of Anatolian

design but Mamluk manufacture, a type unknown to us today except for the copy in Kyoto.

Another unusual type has a field pattern with a central star medallion containing an eight-pointed star and palmettes radially placed within each medallion lobe. Quarter medallions fill the corners of the field, and from them flowering trees grow toward the central medallion. The two examples in Kyoto have different borders, one with scrolling vines, palmettes, and blossoms, the other with cartouches containing highly stylized floral elements (fig. 139).¹⁵⁷ A third rug has a similar cartouche border, but its Persian-style field pattern of palmettes and vines links it to other members of this stylistically disparate group.¹⁵⁸

Apart from the pieces in Japan, the star-medallion rugs are known to us only from a series of Dutch paintings dating from the second half of the seventeenth century.¹⁵⁹ The rugs were depicted draped over tables in the homes of wealthy burghers. Deprived of actual examples to go by, scholars have speculated that rugs of this type were made in Anatolia, northwestern Iran, or even Europe.¹⁶⁰ Could the star-medallion pieces preserved in Japan be seventeenth-century rugs, the very ones depicted in Dutch paintings, the very ones traded by the Dutch in opposite directions? Not according to inventory data in Kyoto, where records indicate that donations were accepted toward the acquisition of two of these rugs in 1791. The third rug was inventoried (or possibly acquired) in 1773.¹⁶¹ The rugs must have been new when acquired, for they are still in fine condition today. The star-medallion rugs in Kyoto must therefore be copies of the earlier pieces illustrated in the paintings.

The eighteenth-century Indian type in the Gion Matsuri Preservation Associations Collection seemed novel to the author and colleagues Nobuko Kajitani and Charles Grant Ellis when first seen in 1986, but other examples may now be added to the twenty-three in that collection. The Toyama Memorial Museum of Art, near Tokyo, possesses four rugs of this class, three with variations of Indo-Persian patterns and one with a blossom-and-lattice design.¹⁶² Eight rugs of this class belong to the Tokugawa Art Museum in Nagoya; seven have Indo-Persian patterns and one is the star-medallion type.¹⁶³ In addition, quite a number of rugs of this class passed through Japanese auctions earlier this century; twenty-six examples have been found for the second decade of this century alone.¹⁶⁴ Most of these are simply variations of the Kyoto rugs, but three rugs have field



Fig. 135 (cat. no. 39). Carpet with pattern of scrolling vines and blossoms. The Deccan, ca. 1770. Gion Matsuri Kanko-boko Preservation Association, Kyoto, Japan



Fig. 136 (cat. no. 40). Carpet with pattern of lattice and flowers. The Deccan, ca. 1750 or earlier. Gion Matsuri Kita-Kannon-yama Preservation Association, Kyoto, Japan



Fig. 137 (cat. no. 41). Carpet with pattern of lattice and blossoms. The Deccan, late 18th century. Gion Matsuri Minami-Kannon-yama Preservation Association, Kyoto, Japan



Fig. 138. Carpet with a geometric pattern based on a Mamluk Egyptian or Anatolian model. The Deccan, early 18th century. Wool pile on cotton foundation, 5'6¹⁵/₁₆" x 4'1/2" (170 x 123.2 cm). Gion Matsuri Kita-Kannon-yama Preservation Association, Kyoto, Japan



Fig. 139. Star-medallion carpet. The Deccan, ca. 1790. Wool pile on cotton and wool foundation, 7'3" x 3'10½" (221 x 118 cm). Gion Matsuri Kita-Kannon-yama Preservation Association, Kyoto, Japan



Fig. 140 (cat. no. 42). Carpet with pattern of scrolling vines and blossoms. The Deccan, ca. 1650. By kind permission of His Grace, the Duke of Buccleuch and Queensberry K.T., from his Collection at Boughton House, Northamptonshire, England (62-506)

Fig. 141 (cat. no. 42). Detail of fig. 140 (opposite)





patterns of rows of flowering plants, the formal flower style not otherwise known in this class.¹⁶⁵

Two carpets in Western collections may indeed belong to the Kyoto group, a term that shall be used here for convenience despite the existence of examples elsewhere. One belongs to the Duke of Buccleuch and Queensberry K.T., Boughton House (figs. 140, 141; cat. no. 42), and the other is in the Österreichisches Museum für Angewandte Kunst in Vienna.¹⁶⁶ The field of each shows a section of a repeating pattern of vines, palmettes, and pairs of curving segmented leaves, a typical Indian variation on the Persian style. The Boughton carpet's border has a full-width, carefully drawn version of the compartment border found in both Herāti and northern Indian carpets (see figs. 63, 64). The border of the Vienna rug looks like a highly compressed version of the same design, but it is actually a half width of the full pattern. Although they look at first glance like northern Indian carpets with Persian-style designs (see especially fig. 54), these two carpets actually have many features characteristic of the Kyoto group: the surface has a granular appearance, the red ground of the field shows considerable wear, the colors include olive green and golden yellow, and there is a considerable amount of black and white outlining. They are also similar technically.

Neither carpet comes with provenance information useful for dating, but the clarity of design and drawing, balance of proportions, and close similarity to northern Indian carpets of the second quarter of the seventeenth century suggest that these two pieces may well be older than the rest of the Kyoto group. Thus, the Boughton rug is dated here to about 1650, and the Vienna carpet to the second half of the seventeenth century. Carpets with these borders are represented in Dutch paintings of the second half of the seventeenth century.¹⁶⁷

The Kyoto group is rather diverse technically, perhaps reflecting a process of experimentation, changes in production over time, or multiple workshops. Warps are white cotton, Z-spun and S-plied with a yarn count ranging from four to eleven. Wefts are usually cotton in three shoots but with variation in color: light brown, white, orange, medium brown, off-white or beige, even blue, a color often linked to later production. One rug has both blue and light brown cotton wefts,¹⁶⁸ and two pieces have undyed brown wool wefts, whereas a rug with a related design has light buff cotton wefts.¹⁶⁹ Knotting is Persian, open to

the left, with knot counts averaging 30 to 40 per square inch, the finest having 110. Two examples that otherwise seem closely matched to the Kyoto rugs have Turkish knots, so technical diversity is the rule.¹⁷⁰

Carpets of the Kyoto group have features in common with the *saphs*, and they too may be attributed to the Deccan. In addition to heavy outlining in black and white and a granular surface appearance, certain guard-stripe patterns, particularly end-to-end geometric S's, occur on both types. Another guard stripe characteristic of the Deccan, featuring hearts and a meandering vine, appears on rugs of the Kyoto group and also on nineteenth-century Deccani pieces. Guard stripes are often reliable indicators of a common source: major patterns of field and border may be dictated by external factors, but guard-stripe patterns usually follow local convention or tradition. Colors are similar to those in other Deccani rugs. For example, compare the hues of the blossom-and-lattice rug in Kyoto (fig. 137) with those of one of the *saphs* (fig. 131).

A painting (fig. 142) attributed to the northern Deccan, about 1650, shows Krishna enthroned atop a carpet with Persian palmette-and-vine patterns with pronounced outlining, slightly oversize floral elements, and a narrow border. The rug may represent Deccani production, our Kyoto group type.

Rugs of the Kyoto group were essentially trade goods. The numerous pieces in Japan must have arrived with the Dutch, who had the concession at Nagasaki from 1640 on. The Dutch obtained carpets from Masulipatnam as early as 1666 (see p. 20). Dutch paintings of the late seventeenth and early eighteenth century show carpets that may well be, now that we are more familiar with the type, Kyoto group examples. Compare the border design of figure 135 to the border of the rug depicted in figure 6. But without precise hints of design or color, it may be impossible to judge whether a depicted carpet is an Indo-Persian or a northern Indian or Deccani version. And without solid inventory information, it may be difficult to know that a rug similar to ones depicted in seventeenth-century paintings is actually an eighteenth-century version or even a copy. Only a few examples of the Kyoto group found their way to the Jaipur Collection, which otherwise provides a good overview of Indian production prior to 1800; these are relatively late (about 1800) pieces with a lattice-and-blossom pattern, similar to one illustrated here (fig. 137).¹⁷¹



Fig. 142. *Krishna Enthroned, Attended by Gopis*. Opaque watercolor and gold on paper. From a dispersed *Rāgamālā* (Garland of Melodies) set. Northern Deccan, ca. 1650. Private collection

Silks

In most settled carpet-weaving societies, the pile fiber of choice for luxury carpets has always been silk. Its seductive shimmer and exclusivity have an undeniable appeal to the wealthy, to whom high cost and relatively poor wearing qualities are of little importance. India is exceptional in this regard. It is not that silk was not highly valued. At the annual weighing of the Mughal emperor's son, when his weight in valuable materials was distributed among the poor, silk was considered the third most costly commodity after gold and silver.¹⁷² Various types of luxury textiles were woven of silk, but another fiber, pashmina, the underhair of the Himalayan mountain goat and the material favored for the finest shawls made in Kashmir, was considered the supreme fiber for carpet pile. Indeed, its fineness and ability to take dyes gave Indian weavers the means to produce some of the most finely woven and exquisitely colored carpets ever made.

Silk carpets were woven in India, but they are relatively late—with only one exception, eighteenth century or later—and provincial versions of the high Mughal style. Some examples are extremely attractive; others are derivative and slightly vulgar. They seem not to have been produced in the north, where pashmina dominated the luxury market even

through the eighteenth century, just in the south, in the Deccan, where pashmina was rarely used. Indeed, in design certain silk pieces closely resemble sheep's-wool rugs we have attributed to the Deccan. It is significant that no silk carpets are known to have been in the Jaipur Collection, so rich in northern Indian and Persian carpets.

Only about a dozen Indian silk rugs dating from before 1800 are known. More than half form a distinctive group with a field pattern of flowering plants arranged in staggered rows within the diamond-shaped compartments formed by a thick, twisting lattice.¹⁷³ The main border typically has a row of circular blossoms, probably carnations, connected by a meandering vine scroll. The palette is limited mainly to wine red, golden yellow, and very dark green, but pink, yellow-ocher, and dark brown also appear. Even with such a limited palette, there is some color mixing—of red and yellow, red and pink—in blossom centers. These are not particularly fine rugs; they have cotton foundations and about 200 knots per square inch. The field pattern is based on the Mughal flower style, as is the use of color mixing, but its stiff, repetitive quality argues for an eighteenth-century dating. The color scheme and border pattern are related to nineteenth-century rugs said to come from Hyderabad, so a probable attribution to that city can be made for the whole group.



Fig. 143 (cat. no. 43). Fragment of a silk carpet with pattern of lattice and blossoms. The Deccan, probably Hyderabad, late 17th or early 18th century. Dar al-Athar al-Islamiyyah, Kuwait Museum of Islamic Art (LNS 20R)



Fig. 144 (cat. no. 44). Silk carpet with pattern of lattice and blossoms. The Deccan, probably Warangal, dated 1192 A.H./A.D. 1778–79. Cincinnati Art Museum, Gift of Beatrice Kelekian in memory of Charles Dikran Kelekian (1985.398)



Two fragmentary pieces from this group stand slightly apart from the rest. One belongs to the Dar al-Athar al-Islamiyyah in Kuwait (fig. 143; cat. no. 43), the other to a private collection in Europe. They were adjoining parts of a half carpet once owned by the Austrian dealer Julius Orendi;¹⁷⁴ the other half has never appeared. In knot count and coloring these fragments are very close to the other pieces of the type, but the foundation is silk and goat's hair.¹⁷⁵ More important, the flower-and-lattice pattern of the field is more graceful and curvilinear, and the main and secondary borders have far more complicated and less schematized floral designs than those seen in the other pieces. One is inclined to attribute this carpet to the time of Aurangzeb—the late seventeenth or early eighteenth century—between the high flower style of Shāh Jahān and the stiffly repetitive pieces of the eighteenth century.

A second distinctive group of silk rugs, comprising only three works, features a broader palette, deeper colors, and a much finer weave. Field patterns are all variations of the flower style. The foundations are cotton, cotton and silk, or all silk, and the knot count ranges between 324 and 568 per square inch. The piece in the Cincinnati Art Museum (fig. 144; cat. no. 44) has a blossom-and-lattice pattern that is very stylized but well designed

and beautifully drawn. A rug that passed through the London trade in 1982¹⁷⁶ also has a blossom-and-lattice pattern, but the lattice is very subtle and it looks at first glance to be simply a repeating floral design. The third rug, supposedly once in the collection of the king of Afghanistan, Muḥammad Zāhir Shāh, survives in numerous small fragments that began to appear in the London market in the 1980s.¹⁷⁷ Here the field has staggered rows of formal flowering plants.

This group also represents eighteenth-century Deccani production, but from a center different from that of the previous group. There are striking similarities between the rug seen in the London trade in 1982 and a sheep's-wool rug attributed to Warangal (see pp. 134, 136), notably in the main border design, especially the diagonal corner solution, and in the small-lobed quarter medallions in the corners of the field, so a probable assignment to Warangal can be proposed. These three pieces would be dated to the eighteenth century on stylistic grounds alone, but it is helpful to have a date of 1192 A.H./A.D. 1778–79 in a cartouche in the main border of the Cincinnati rug. This is the only Indian carpet known with an inwoven date, and it is fortunately the only part of the inscription not to have been garbled by repair.

Microscopic Analysis of Animal Fibers Found in Classical Indian and Persian Carpets

MARTIN N. YOUNGBERG

Laboratory Manager

Fashion Institute of Technology, New York

It is often possible to identify animal fibers by studying their microscopical characteristics. The recognition of a single feature very rarely establishes the identity of the genus; more often, it is necessary to recognize a unique combination of characteristics.

With the exception of silk, all animal fibers are covered by a scaly outer surface layer called the cuticle. The shape, size, and prominence of the scales in the cuticle offer, perhaps, the most characteristic features of animal fibers. Angular prominent scales suggest sheep's wool, whereas the specialty fibers have smoother scale edges. Cashmere, particularly from the undercoat, has scales that are relatively far apart or longer along the axis than most other fibers, and this, coupled with fineness and distribution of any pigment, is a distinguishing feature. (Scales look like stacked flowerpots.) Some animal fibers have a medulla, a central core of air-filled cavities, and this can be another identifying characteristic. Some fur fibers have a ladder-type medulla. Cross-sectional shape is another distinguishing characteristic, especially for alpaca and llama.

One fragment from the Museum of Fine Arts, Boston (05.58), is composed of camel's hair.

Methods

Twelve carpets were selected for sampling in 1996 by Nobuko Kajitani and Daniel Walker, and samples of the pile material from the Metropolitan Museum pieces were taken by Shelley Greenspan of the Museum's Textile Conservation staff. All carpets sampled belong to the Metropolitan Museum except two that belong to the Museum of Fine Arts, Boston (BMFA). All samples were undyed fiber except 1983.494.5, which was yellow. The identification of animal species is as follows: sheep's wool (genus *Ovis*), cashmere wool (*Capra hircus laniger*), camel's hair (*Camelus dromedarius* or *bactrianus*).

The American Society for Testing and Materials (ASTM) Test Method Designation D2130-90, "Standard

Test Method for Diameter of Wool and Other Animal Fibers by Microprojection." Also, The American Association of Textile Chemists and Colorists (AATCC) Test Method 20-1990, "Fiber Analysis: Qualitative."

- a. An initial examination was made and differences were noted before the samples were prepared in any manner.
- b. Microscopical examination began by preparing whole (longitudinal) mounts using two mounting mediums of different refractive indexes (1.577 and 1.704). Wool and other hair fibers have a refractive index of 1.55–1.56. When wool and other hair fibers are mounted in a medium of similar refractive index (1.577 mountant), surface characteristics are practically invisible, but internal structure and the presence of medullae and pigments are clearly revealed. When wool and other fibers are mounted in 1.704, the surface details, i.e., epidermis scales, are clearly revealed.
- c. The examination proceeded with the fibers mounted in 1.577 and 1.704 refractive index mediums. The results obtained will be found in the chart. Following is a list of the carpets, arranged in the order of the chart, indicating the type of carpet and the figure and catalogue numbers of those included in *Flowers Underfoot*. Bibliographical references for other carpets are included when appropriate.

05.58 (BMFA)

Fragment of Indian carpet with pattern of scrolling vines and animal heads. From same carpet as fig. 66, cat. no. 16a

1983.494.5

Fragment of Indian carpet with pattern of scrolling vines and blossoms. From same carpet as fig. 74, cat. no. 17



14.40.722
Fragment of Indian carpet with niche-and-flower design. Fig. 10

1970.321
Indian carpet with flower pattern. Fig. 93, cat. no. 22

1983.494.6
Fragment of Indian carpet with flower pattern. From same carpet as fig. 97

14.40.712
Fragments of Indian carpet with pattern of lattice and blossoms. Fig. 111, cat. no. 30

32.100.457
Fragment of Indian carpet with pattern of lattice and blossoms. Fig. 111, cat. no. 30

14.40.713
Indian carpet border fragments. Dimand and Mailey 1973, cat. no. 62, p. 124, fig. 138

14.40.725
Indian carpet with pattern of scrolling vines and blossoms. Fig. 80

67.267
Indian carpet with millefleur pattern. McMullan 1965, no. 33, pp. 140–41

04.111 (BMFA)
Fragment of Persian (Herāt) carpet with compartment design. From same carpet as fig. 90

1991.154
Fragment of Persian (Khorāsān) carpet with compartment design. Martin 1908, p. 41, fig. 103

Fiber Identification and Characteristics (Per AATCC Method 20, Table I)

According to ASTM D2817, cashmere coarse hairs are those fibers having widths greater than 30 micrometers. Cashmere fine down fibers have widths of 30 micrometers or less.

The upper-case X denotes an especially significant feature; the lower-case x indicates a less significant feature.

Sample designation	BMFA 05.58	1983.494.5	14.40.722	1970.321	1983.494.6	14.40.712
Material	camel's hair	cashmere wool	cashmere wool	sheep's wool	sheep's wool	cashmere wool
Longitudinal mount						
Epidermis:						
Pronounced		X	X	X	X	X
Faint	x					
Coronal		X	X			X
Imbricate				X	x coarse	
Smooth edge					x	
Serrated edge						
Medulla:						
Occurrence:						
Usually present				X	x coarse	
Seldom present	x coarse				x fine	
Never present	x fine	X	x			x
Type:						
Fragmented				X		
Interrupted	x coarse			X	x fine	
Continuous				X	x coarse	
Pigment:						
Diffuse			x some			
Streaky						
Granular	x		x some tan			
None		x		x		x
Fineness measured						
in micrometers	19.77	15.8	10.3	28.85	26.85	13.99
Av. number of scales						
per 100 micrometers	7.7	7.2		9	7.2	7.6
Range	5 to 10	5 to 10		7 to 11	5 to 10	6 to 10

Fiber Identification and Characteristics (Per AATCC Method 20, Table 1)

According to ASTM D2817, cashmere coarse hairs are those fibers having widths greater than 30 micrometers. Cashmere fine down fibers have widths of 30 micrometers or less.

The upper-case X denotes an especially significant feature; the lower-case x indicates a less significant feature.

Sample designation	32.100.457	14.40.713	14.40.725	67.267	BMFA 04.III	1991.154
Material	cashmere wool	cashmere wool	cashmere wool	cashmere wool	cashmere wool	sheep's wool
Longitudinal mount						
Epidermis:						
Pronounced	X	X	X	X	X	X
Faint						
Coronal	X fine	X fine	X	X	x some	x some
Imbricate	x coarse	x coarse			x coarse	X
Smooth edge	x		x			
Serrated edge						
Medulla:						
Occurrence:						
Usually present	x coarse	x coarse				x coarse
Seldom present					x coarse	
Never present	x fine	x fine	X	X	x fine	x fine
Type:						
Fragmented						
Interrupted		x coarse				x coarse
Continuous					x coarse	
Pigment:						
Diffuse	x				one black	
Streaky	x		x			
Granular			x			
None		x		x		x
Fineness measured						
in micrometers	13.9	19.77	15.3	15.05	14.76	27.82
Av. number of scales						
per 100 micrometers	8.3	7.7	7	6.7	6.6	6.3
Range	6 to 15	5 to 10	6 to 8	5 to 8	5 to 10	5 to 7

Natural Dyes in the Near and Middle East and India

HARALD BÖHMER

Marmara University, Istanbul

Indigo

Indigo is the only natural blue dyestuff that imparts a high degree of lightfastness to textile fibers. Its formula has been known since 1883.^{1*} In the third century B.C., Mohenjo-Daro, in what is now Pakistan, was the center of the so-called Indus Valley culture. After 1947, archaeologists excavating the ruins, led by Sir Mortimer Wheeler, found small amounts of indigo in the cracks of hollows in a stone floor, which indicated that the hollows had been used for dyeing. The first use of indigo to dye textiles probably occurred in the Indian subcontinent. The leaves of a shrub, *Indigofera tinctoria* L., yield a colorless aqueous chemical substance, indican, from which indigo is derived in a complicated fermentation process. The shrub, a papilionaceous plant, has been cultivated in India for more than four thousand years. In 1320 Arabs tried to cultivate *Indigofera tinctoria* L. near Jericho,² but they did not succeed.

The oldest excavated textiles dyed with indigo are Egyptian,³ dated 1580 B.C. but perhaps as much as one hundred years older. Most of these fabrics were woven from linen, and the dry climate of Egypt preserved them very well.

Indigo is a vat dye, which means that the dyestuff is insoluble in water and must be made water soluble to be fixed on the fiber. This is done by the chemical process of reduction in a solution called the dyeing liquor, which has a complex composition. The main ingredients were bran, sweet fruits or honey, and urine or chalk. Through reduction, the blue indigo turns into a water-soluble yellow substance. The fibers were put into this yellow dyeing liquor. Then, by exposure to air, the water-insoluble blue indigo is re-formed on the fiber by oxidation. Thus indigo lies on the fiber rather than bonding with it, which explains why blue jeans are not resistant to rubbing.

In the Middle East there is another plant that yields indigo: *Isatis tinctoria* L., or dyer's woad. It is a cruciferous plant, a biennial that in the first year forms only a leaf-rossette and in the second develops a stalk about three feet high. Indigo was obtained in a fermentation process from isatin B in the leaves.

A method for vat dyeing with dyer's woad is described⁴ in detail in the papyrus Graecus-Holmiensis of the third century A.D., which was derived from a book on dyeing by the Greek Bolos Democritus, who lived in the Nile Delta in the second century B.C.

The *Indigofera tinctoria* of India is superior to *Isatis tinctoria*. Its leaves contain much more of the substance that produces indigo during the fermentation process. Large quantities of indigo were exported from India to the Mediterranean markets after the Portuguese Vasco da Gama discovered the sea route to India in 1498. The term *indigo*, which is derived from "India," came into use at that time, but indigo produced locally from dyer's woad was also used for many centuries: Ottoman tax lists⁵ show that in the sixteenth century people of the Peloponnese had to pay their taxes partly in dyer's woad.

One cannot distinguish by chemical analysis whether the indigo of dyed textiles has been derived from *Isatis tinctoria*, *Indigofera tinctoria*, or other plants, and no difference can be seen between natural and synthetic indigo, which became available at the end of the nineteenth century.

Scarlet

Scarlet is a bluish red obtained from various dye insects found in many parts of the world. A scale insect of India, Cambodia, Thailand, and Sumatra produces lac (*Kerria lacca* Kerr). The Mediterranean coast is the most important source of kermes (*Kermes vermilio* Planchon), but they are also found near the Zagros Mountains in Persia. Ararat kermes (*Porphyrophora hameli* Brandt) are found near the foot of Mount Ararat in both Armenia and Turkey. The dye insect grain-cochineal (*Porphyrophora tritici*) was found in central Anatolia until twenty-five years ago. Eastern Europe is the home of Polish kermes (*Porphyrophora polonica* L.).

Dye from the Mexican cochineal (*Dactylopius coccus* Costa) came on the market soon after the Spaniards arrived in Mexico early in the sixteenth century. Cochineal insects have been cultivated on Lanzarote, one of the Canary Islands, since the middle of the nineteenth century. The dyeing quality of cochineal is superior to that

*Notes for this essay are on pages 158–59.



of any other dye insect, so within a short time it almost displaced the other insect dyes.

The term *kermes* means, in general, bluish red. The Turkish word for red, *kırmızı*, is related to the Arabian *qirmiz*, the French *cramoisi*, the English *crimson*, and the German *Karmin*. Kermes red is a dye obtained from an insect (*Kermes vermilio* Planchon), a parasite that feeds on the dwarf evergreen kermes oak (*Quercus coccifera* L.), which grows in the Mediterranean coastal areas. The insect can still be found in the Aegean region of Turkey, in southern France, and in Tunisia. Adult females containing hundreds of eggs were collected in May, killed by immersing in vinegar, dried, and then powdered for the dyeing process. *Kermes vermilio*, with an alum mordant, gives both wool and silk a high degree of lightfastness. On silk the dye imparts a brilliant bluish red, but is less brilliant on wool.

According to a text of 1300 B.C., kermes were already known to the Babylonians.⁶ The dye has been detected in Roman textiles from Palmyra, dated to the first and second centuries A.D.⁷

The main dye substance in *Kermes vermilio* Planchon is kermesic acid; flavokermesic acid is a minor dye ingredient.

It is known from Ottoman tax registers of the sixteenth century that villagers had to collect the kermes insects and deliver them to the Ottoman court,⁸ but researchers have not been able to find the characteristic dye ingredients of *Kermes vermilio* in carpets from Turkey, Iran, India, and elsewhere that have been tested.

Polish kermes (*Porphyrophora polonica* L.) are found from eastern Germany to the Ukraine, as parasites on the roots of a perennial plant (*Scleranthus perennis* L.) and also on some other plants. At some time they were probably found much farther to the east, because we know that the fifth-century B.C. Pazyryk carpet and Siberian felts of the same era contain the characteristic combination of the two red dyestuffs derived from Polish kermes, carminic acid and kermesic acid.⁹ The Pazyryk carpet is the earliest pile carpet known, named for the valley in the Altai Mountains of Siberia where it was found in the late 1940s. Red dye obtained from Polish kermes has also been found in Roman textiles from Palmyra.¹⁰ According to Donkin,¹¹ in the middle of the seventeenth century Ukrainian Jews rented land bearing the plants that sustained Polish kermes; they organized the harvest and sold the dried insects to Armenian and Turkish merchants. Thus it is certain that Polish kermes were traded in the seventeenth century and probably considerably earlier because we found Polish kermes in a caftan attributed to Sultan Mehmed II, the conqueror of Constantinople in 1453.¹²

Lac (*Kerria lacca* Kerr) is obtained from insects that live on various trees in India, Cambodia, Thailand, and Sumatra. Clustered together, they suck on branches until they are totally covered by their red excrement. Twice a year the encrusted insects are collected, dried, powdered,

and then traded as lac dye. The dye ingredients are laccaic acids that are not present in other dye insects. Therefore, textiles dyed with lac can be distinguished by chemical analysis from those whose dyes come from other insects.

Lac was first used in India. It found its way from there to the Mediterranean area very early: it has been found in Roman textiles from Palmyra¹³ and was probably used in the Ottoman Empire as early as the fifteenth century. In Turkey lac was mentioned in the Bursa guild and market regulations of the early sixteenth century.¹⁴ It was in Bursa that Ottoman silk velvets were woven. Lac is also usually found in sixteenth- and seventeenth-century Ottoman court carpets, the Mamluk carpets from Cairo,¹⁵ and Iranian and Indian carpets.

In the eighth century B.C., Sargon II, king of Assyria, defeated the Urartean kingdom and plundered its palaces. "Scarlet red textiles from Ararat" are listed as booty.¹⁶ We can assume that these highly appreciated textiles were dyed with Ararat kermes (*Porphyrophora hameli* Brandt), which is referred to in the literature as Armenian kermes or Armenian cochineal. The essential dye ingredient of these insects, carminic acid, has been found in Roman textiles of the first and second centuries A.D. from Palmyra. Armenian literary sources¹⁷ from as early as the fifth century cite their use in dyeing silk and for color employed in miniature painting. Ararat kermes fell into disuse many years ago, but several Armenian institutions are now trying to reintroduce them.¹⁸ The insect is a parasite that feeds on the roots of a common reed (*Phragmites australis* Trin.) that grows near the slopes of Mount Ararat and in the salty marshes near the Araks River. In the fall of 1990 the author found Ararat kermes on the Turkish side of the river. During a few days in autumn the full-grown insects come to the surface of the marsh for a short time after sunrise to lay their eggs. Then it is easy to collect them.

Ararat kermes dye wool and silk easily and quickly. Using 20 to 50 percent Ararat kermes in relation to the weight of the fiber yields only a light pinkish red. The most striking colors are obtained by using 200 percent Ararat kermes, on both wool and silk.

An unfamiliar dye insect will be mentioned here: *ekin*, or grain cochineal (*Porphyrophora tritici*), of central Anatolia. This insect is a parasite on the roots of wheat and various wild grasses, but it was probably eradicated by DDT thirty years ago when it caused devastating losses in the Turkish wheat harvest. Only some samples preserved in alcohol at the Agricultural Institute in Karapınar in central Anatolia were available in 1991. The dyestuff in *Porphyrophora tritici* turned out to be carminic acid, the same dye found in *Porphyrophora hameli* from the Ararat region and cochineal (*Dactylopius coccus*) from the New World.

Neither the local people nor the literature indicated that these insects were ever used for dyeing. But we

cannot reject the idea that they were used many centuries ago. Carminic acid present in Palmyrean textiles might have been derived from ekin cochineal as well as from Ararat kermes.

Dye Insects and Their Characteristic Dye Ingredients

Dye insects	Dye ingredients
kermes (<i>Kermes vermilio</i> P.)	kermesic acid + flavokermesic acid
Polish kermes (<i>Porphyrophora polonica</i> L.)	carminic acid + kermesic acid
Ararat kermes (<i>Porphyrophora hameli</i> B.)	carminic acid + traces of kermesic acid
grain cochineal (<i>Porphyrophora tritici</i>)	carminic acid + traces of kermesic acid
lac (<i>Kerria lacca</i> K.)	laccic acids
cochineal (<i>Dactylopius coccus</i> C.)	carminic acid + traces of kermesic acid

Explanations to the table:

Three of the dye insects, namely kermes (*Kermes vermilio*), Polish kermes (*Porphyrophora polonica*), and lac (*Kerria lacca*) contain different dyestuffs or different dyestuff combinations and can easily be distinguished from one another by dye analysis.

Carminic acid is the main component of the three other dye insects, making them difficult to distinguish in dyed fabrics.

Two of these three insects are found in the Old World, namely Ararat kermes (*Porphyrophora hameli*) and grain cochineal (Turkish ekin cochineal; *Porphyrophora tritici*); the third, cochineal (*Dactylopius coccus*), is found in the New World.

Cochineal (*Dactylopius coccus* Costa) is a parasite that lives on several species of cactus cultivated in Mexico, the Central American countries, and, since the mid-nineteenth century, on Lanzarote, one of the Canary Islands.

Of the four dye insects that contain carminic acid, cochineal has the largest quantity, fifteen to thirty-three times as much, and it is the easiest to use for dyeing. Literary sources indicate that cochineal was sold in the markets of Europe and found its way to Istanbul shortly after the conquest of Mexico. By 1560 cochineal was reported in Venice, and Venetian merchants controlled much of the trade with Istanbul. An English merchant who lived there wrote in a letter of 1586 that cochineal stored in Pera (modern Beyoğlu) was to be shipped to Cairo and Aleppo.¹⁹ Donkin writes: "The dye stuff was at all times costly and found a ready market only where

luxury textiles, such as brocades and carpets, were manufactured in Western Asia."²⁰ The most luxurious brocades were woven in the Ottoman court workshops of Bursa in the fifteenth century and in Istanbul after the middle of the sixteenth century. Logic would indicate that the best red dye available would have been used for these prestigious silks: the latest, most expensive, and best dye, cochineal from Mexico. It was often used mixed with indigo to obtain a special kind of brilliant shellfish purple, commonly known as Phoenician purple.

Madder Red

The Egyptians, Greeks, and Romans all used madder for dyeing.

Madder red was seldom used in court-related silk textiles because of its poor lightfastness. However, madder is lightfast on wool.

There are three important madder plants. They belong to the Rubiaceae family. *Rubia tinctorum* L. is found in Anatolia, Iran, and Central Asia; *Rubia cordifolia* L. and *Oldenlandia umbellata* L. in India.

Rubia tinctorum L. is a shrub. Every year its branched, creeping rootstock thrusts up stalks to a height of 4.5 feet. These stalks bear tiny thorns and are surrounded by whorls of lanceolate leaves. Madder thrives especially when grown on loamy soil that is not too dry. It is probably indigenous to Anatolia and was cultivated in western and central Anatolia, Iran, and in some areas of Central Asia. Because of the emergence of synthetic dyes, its cultivation declined rapidly in the last third of the nineteenth century. Today, madder can only be found growing wild in the old areas of cultivation.

To prepare the dye, roots of plants at least two years old were dried and ground up. In former times the dried roots were known in the trade as lizari or alizari. Many dyeing methods were known, one of them being the famous Turkey-red dyeing of cotton. Through the choice of mordants such as alum and iron salts and additions such as fruits containing acids or sour milk to the dye bath, various red hues can result and it is even possible to obtain purple. The main dye ingredients of madder are alizarin and pseudopurpurin, but there are up to fourteen others. Carl Graebe and Carl Liebermann produced the first synthetic alizarin in 1868, and since 1871 it has been manufactured in industrial quantities.

Rubia cordifolia L. is indigenous to India, Nepal, China, Japan, and tropical Africa. It is a climbing plant, formerly cultivated in India, and it contains almost the same dye ingredients as *Rubia tinctorum*. Therefore it is difficult to determine by dye analysis which plant was used for dyeing.

Oldenlandia umbellata L. is a shrub indigenous to India, Burma, Sri Lanka, and Java, where it grows in the sandy soil of coastal areas. It is commonly called chay root. The dried roots were traded as a dye material. According to our research, the roots contain high amounts





of pseudopurpurin and munjistin but only traces of alizarin.²¹ Therefore it is easy to distinguish between red obtained from this madder plant and red from the other two. Tibetan carpets are often dyed with *Oldenlandia umbellata*.

Yellow and Green

The yellow and green of court-related and some tribal carpets come mainly from the dyestuff luteolin, which has the highest degree of lightfastness of any yellow dye ingredient. The most important source for luteolin is weld, also called dyer's rocket. The blue component in green is indigo.

Weld (*Reseda luteola* L.) is a perennial plant of the Reseda family that grows to more than 4.5 feet in height. In May and June it bears numerous small yellow flowers, which form into slender clusters. The whole plant—except for the root—is used in extracting luteolin. In addition, the blossoms contain small amounts of apigenin, a yellowish crystalline substance. With alum mordant, brilliant lightfast yellows are obtained.

Weld was used by the Romans as a dye plant. It was cultivated and traded in Anatolia and Persia. It was used in court-related dye houses in Ottoman Turkey, Safavid Iran, and Mughal India.

Asbarg (*Delphinium semibarbatum*) is the Iranian name for a yellow flowering larkspur. It grows in Iran, Afghanistan, Central Asia, and some areas of India, but not in Anatolia. Flowers, leaves, and stems contain three different dye-stuffs, but the lightfast luteolin is absent. *Asbarg* has often been used for yellow and green dyes in village and tribal rugs, but seldom in court rugs.

In the carpet-weaving areas there are at least fifty different plants that produce yellow dyestuff. Many of the dye plants were only used locally, for village rugs or nomadic weavings. Through chemical analysis, some dye ingredients can be identified as corresponding to a specific plant. For instance, the dye ingredient fisetin comes from dyer's sumac (*Cotinus coggygria*); datiscetin comes from bastard hemp (*Datisca cannabisa* L.).

Dyer's sumac (*Cotinus coggygria* L.) is a shrub that grows to more than 15 feet in height and can be recognized by its ovoid, long-stemmed leaves. In late summer large frutescences envelop the shrub like a wig, thus its popular name, wig shrub. These frutescences, which can grow to 12 inches in diameter, consist of numerous threadlike, feathery fruit stems, but only a few bear small fruits.

The wig shrub prefers sunny slopes; it is found in Mediterranean coastal areas, and in the eastern Black Sea and Caspian Sea regions. The source of the dye is the heartwood, which contains the largest amount of fisetin. The extract of the heartwood, with an alum mordant, produces a clear yellow dye, which becomes orange with the addition of an alkali. Neither hue is quite lightfast; after some time the colors become duller and browner.

According to Pliny the Elder, dyer's sumac was used in ancient times for dyeing leather yellow, and heartwood was traded. Fisetin, the characteristic dyestuff of dyer's sumac, has been detected in Ottoman court carpets, Mamluk carpets,²² and Anatolian village rugs.²³

Bastard hemp (*Datisca cannabisa* L.) is a shrub that grows to about 6 feet in height. In form it resembles the true hemp (*Cannabis sativa*) but differs from its green-flowering relative in its yellow blossoms, small and closely packed in long branched clusters. Bastard hemp flourishes in warm moist ravines and forests, and it is found in western Anatolia, the Black Sea region, the Caucasus, the Caspian Sea region, and on the slopes of the Himalayas. The entire plant is usable for dyeing. The typical dye ingredient is datiscetin. It has been detected in Anatolian village carpets and flat weaves.²⁴

NOTES

1. Adolf von Baeyer first synthesized indigo in 1880 and three years later formulated its structure. He received the Nobel Prize for chemistry in 1905.
2. See Ludwig Reinhardt, *Kulturgeschichte der Nutzpflanzen*, Die Erde und die Kultur: Die Eroberung und Nutzbarmachung der Erde durch den Menschen, 4 (Munich, 1911).
3. H. Schweppe, *Handbuch der Naturfarbstoffe* (Landsberg, 1993), p. 23.
4. *Ibid.*, p. 24.
5. Information provided by Dr. Reindl-Kiel, University of Bonn, to the author in 1989.
6. See M. Levy, "Dyes and Dyeing in Ancient Mesopotamia," *Journal of Chemical Education* 32 (1955), pp. 625–29.
7. Harald Böhmer and Recep Karadağ "Farbanalytische Untersuchungen an Textilien aus Palmyra"; to be published by the German Archaeological Institute.
8. See note 5 above.
9. Harald Böhmer and Jon Thompson, "The Pazaryk Carpet: A Technical Discussion," *Source* (New York) 10, no. 4 (1991), pp. 30–36.
10. See note 7 above.
11. R. A. Donkin, "The Insect Dyes of Western and Central Asia," *Anthropos* 72 (1977), pp. 847–80.
12. Harald Böhmer and Recep Karadağ "Dye Analysis of Ottoman Brocades and Velvets from the Topkapı Museum, Istanbul, and Other Silk Textiles," in *Internationale Konferenz für Orientteppiche Vorträge, Postersessions/7th International Conference on Oriental Carpets, Papers, Presentations: Hamburg, 17–20.6.93, Berlin, 20.–22.6.93* (Düsseldorf, 1996), pp. 69–78.
13. See note 5 above.
14. Nevber Gursu, *The Art of Turkish Weaving: Designs through the Ages*, ed. William A. Edmonds (Istanbul, 1988), p. 45.
15. Nevin Enez and Harald Böhmer, "Ottoman Textiles, Dye Analysis, Results, Interpretations," *Dyes in History and Archaeology* (York), no. 14 (1996), pp. 39–44.
16. See Donkin, "Insect Dyes," note 11 above.
17. *Ibid.*

18. See the article "Vordan Katmir: The Red Worm," in the *Soviet-Armenian Encyclopaedia*, vol. 8 (1982), pp. 642–43. This article has been translated by Lemyel Amirian in the *Oriental Rug Review* 8, no. 5 (1988), p. 42.
19. See *The Travels of John Sanderson in the Levant, 1584–1602, with His Autobiography and Selections from His Correspondence*, ed. Sir William Foster, Hakluyt Society Publications, 2d ser., no. 67 (London, 1931).
20. See Donkin, "Insect Dyes," note 11 above.
21. This result contradicts Schweppe's finding. He writes (in his *Handbuch*, p. 241, note 3 above) that alizarin is the main dye component of *Oldenlandia umbellata*. This contradiction has not been clarified until now. Probably the roots we analyzed were not labeled with the correct scientific name.
22. Nevin Enez, "Uno Studio sulle antiche tincture," *Ghereh*, no. 4 (December 1994), pp. 51–55.
23. Werner Brüggemann and Harald Böhmer, *Rugs of the Peasants and Nomads of Anatolia*, trans. E. G. Herzog and G. M. and G. E. Holines, exh. cat., Museum für Kunsthandwerk, Frankfurt am Main (Munich, 1983), p. 113.
24. *Ibid.*, p. 102.



Dye Analysis of Classical Indian and Persian Carpets

RECEP KARADAĞ, NEVİN ENEZ, AND HARALD BÖHMER

Laboratory for Natural Dyes

Marmara University, Istanbul

Fourteen carpets were selected for sampling in 1996 by Nobuko Kajitani and Daniel Walker, and samples of the pile (red, yellow) and weft (red) of the Metropolitan Museum pieces were taken by Shelley Greenspan of the Museum's Textile Conservation staff. All carpets sampled belong to The Metropolitan Museum of Art (MMA) except one that belongs to the Österreichisches Museum für Angewandte Kunst, Vienna (MAK); one, to the Museum of Fine Arts, Boston (BMFA); and two, to private collectors.

MMA 1971.263.3

Fragment of Indian carpet with pattern of fantastic animals

From same carpet as figs. 21, 22; cat. nos. 1a, 1b

red pile	lac
yellow pile	luteolin

BMFA 05.58

Fragment of Indian carpet with pattern of scrolling vines and animal heads

From same carpet as fig. 66; cat. no. 16a

red pile	alizarin (madder)
red weft	cochineal

MMA 1983.494.5

Fragment of Indian carpet with pattern of scrolling vines and blossoms

From same carpet as figs. 74, 75; cat. no. 17

red pile	lac
yellow pile	luteolin

MMA 17.190.857

Indian carpet with pattern of scrolling vines and blossoms

Fig. 54

red pile	lac
yellow pile	luteolin and another unidentified dye ingredient
red weft	lac

MMA 1970.321

Indian carpet with flower pattern

Figs. 93, 94; cat. no. 22

red pile	lac
yellow pile	luteolin and another unidentified dye ingredient

MMA 1983.494.6

Fragment of Indian carpet with flower pattern

From same carpet as fig. 97

red pile	lac
yellow pile	luteolin

MMA 1970.302.7

Indian carpet with niche-and-millefleur pattern

Fig. 129; cat. no. 36

red pile	lac
yellow pile	luteolin

MMA 17.123.3

Indian hanging in the millefleur style

Fig. 127

red weft	lac and another unidentified dye ingredient
yellow weft	luteolin and probably another unidentified dye ingredient

Wolf Collection

Indian multiple-niche prayer carpet

Figs. 132, 133; cat. no. 38

red pile	lac
light red pile	lac
yellow pile	luteolin

MAK (Or. 349)

Indian carpet with pattern of scrolling vines and blossoms

Ch. 4, n. 166

red	lac
-----	-----

Weksler Collection

Fragment of silk Indian carpet with flower pattern

Another fragment from same carpet: *Hali* 53, October 1990, p. 102 (adv.)

red pile	lac
yellow pile	dye ingredient not identified; it is <i>not</i> luteolin
light yellow pile	dye ingredient not identified; it is <i>not</i> Luteolin

MMA 1970.302.1

Fragment of Persian (Herāt) carpet with pattern of scrolling vines, blossoms, and birds

McMullan 1965, no. 13, pp. 66–67

red pile	lac
yellow pile	luteolin

MMA 14.40.711

Persian (Indo-Persian) carpet with pattern of scrolling vines and blossoms

Dimand and Mailey 1973, cat. no. 30, p. 70, fig. 99

red pile	lac
yellow pile	luteolin



MMA 30.95.228

Fragment of Persian (Indo-Persian) carpet with pattern of scrolling vines and blossoms

Dimand and Mailey 1973, cat. no. 35, p. 109

red pile	lac
----------	-----

Checklist of the Exhibition

NOTE: In dimensions used throughout, length precedes width. Citations under *Literature* and *Exhibitions* are selected and are not comprehensive. When the *Technical Information* is tentative, it is because the examination involved physical limitations, i.e., the carpet was lined, edges were covered, etc. Side and end finish are described only when original. Terms used are explained in the Glossary.

1a. *Fragment of a carpet with pattern of fantastic animals*

Northern India, probably Fatehpur Sikri, ca. 1580–85
5' x 3' 8½" (152 x 113 cm)

EX COLL.: Dr. Roden, Frankfurt (acquired in Paris); Collection Octave Homberg (sold at auction, Galerie Georges Petit, Paris, June 3–5, 1931, no. 123); acquired by the Detroit Institute of Arts from the Homberg sale.

LITERATURE: Martin 1908, pp. 80, 82, fig. 192; Munich 1912, pp. v–vi, pl. 84; Bode and Kühnel 1922, p. 29, fig. 49; Paris 1931, no. 123, p. 59, pl. LIV; Cohen, "Fearful Symmetry," 1996, p. 109, fig. C

EXHIBITION: Munich 1910

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, z6s, z7s, alternates moderately depressed

Weft: buff cotton, z3, z4, x 3 (scattered lazy lines)

Knots: wool, z1 or z2, Persian open to the left, 14 horizontal x 15 vertical (210 per square inch)

The Detroit Institute of Arts, Founders Society Purchase, Edsel B. Ford Fund (31.64)

Fig. 21, p. 34

1b. *Fragment of a carpet with pattern of fantastic animals*

Northern India, probably Fatehpur Sikri, ca. 1580–85
3' 5¾" x 4' 2⅞" (106 x 129.2 cm)

EX COLL.: Acquired by the Textile Museum in 1950 from de Hauke.

LITERATURE: Beattie 1961, p. 162; New York 1963, no. 21, pp. 31, 67, 165; London, *Indian Heritage*, 1982, no. 191, p. 74; Cohen, "Fearful Symmetry," 1996, pp. 113, 123, 192–93, fig. J

EXHIBITIONS: New York 1964; London, *Indian Heritage*, 1982

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, z6s, alternates moderately depressed
Weft: light beige cotton, z4, x 3 (lazy lines)

Knots: wool, z2, Persian, 14 horizontal x 13 vertical (182 per square inch)

The Textile Museum, Washington, D.C. (R63.00.20A)

Fig. 22, p. 35

2. *Carpet with pictorial design*

Northern India, Lahore, ca. 1590–1600
7' 11⅝" x 5' ⅝" (243 x 154 cm)

EX COLL.: Purchased by Frederick L. Ames in 1882 on the advice of William Morris; donated to the Museum of Fine Arts, Boston, in 1893.

LITERATURE: Martin 1908, pp. 98–99, fig. 234; New York 1910, no. 49, pp. xxxix, 61; Bode and Kühnel 1922, p. 30, fig. 51; Sarre and Trenkwalde 1926–29, vol. 2, p. 25, pl. 59; Chicago 1947, no. 20; New York 1963, no. 22, pp. 31, 68, 165; Ellis, "Indian Carpets," 1965, p. 13, fig. 3; K. Erdmann 1970, pp. 74–75, fig. 83; K. Erdmann 1976, p. 57, fig. 172; Walker 1982, p. 254, fig. 4; Bode and Kühnel 1984, pp. 163–64, fig. 119; Gans-Ruedin 1984, pp. 68–69; New York, *Akbar's India*, 1985, no. 72, pp. 111–13



EXHIBITIONS: New York 1910; Chicago 1947; New York 1964; New York, *Akbar's India*, 1985–86

TECHNICAL INFORMATION, results tentative (D. Walker):

Warp: ivory cotton, z7s, z8s, alternates depressed

Weft: apricot cotton, z3, z4, x 3

Knots: wool, z2, Persian open to the left, 20 horizontal x 23 vertical (460 per square inch)

Sides: traces of red wool overcasting

Ends: plain-weave band

Museum of Fine Arts, Boston, Gift of Mrs. Frederick L. Ames in the name of Frederick L. Ames (93.1480)

Fig. 29, p. 39

3. *Carpet with pictorial design*

Northern India, Lahore, ca. 1590–1600

7' 8½" x 5' 1½" (235 x 156 cm)

EX COLL.: Imperial Museum of Oriental Art, Vienna.

LITERATURE: Vienna 1892–93, vol. 1, part 1, p. 1, pl. 1; Martin 1908, pp. 98–99, fig. 236; Munich 1912, no. 172, p. v, pl. 80; Bode and Kühnel 1922, p. 29, fig. 50; Sarre and Trenkwald 1926–29, vol. 1, p. 12, pls. 35, 36; London 1976, no. 98, p. 116; Gans-Ruedin 1984, pp. 76–77; New York, *India*, 1985, no. 112, pp. 180–81

EXHIBITIONS: Vienna 1891; Munich 1910; London 1976; New York, *India*, 1985–86

TECHNICAL INFORMATION, results tentative (D. Walker):

Warp: ivory cotton, z8(?)s, alternates very depressed

Weft: apricot (dull orange) cotton, z2, z3, x 3

Knots: wool, z2, z3, Persian open to the left, 20½ horizontal x 21 vertical (430 per square inch)

Österreichisches Museum für Angewandte Kunst, Vienna (OR 292)

Fig. 31, p. 41

4. *Carpet with pictorial design*

Northern India, Lahore, late 16th or early 17th century
27' 4" x 9' 6" (833 x 289.5 cm)

EX COLLS.: Lady Sackville, Knole Park, Kent, England; J. Pierpont Morgan, New York.

LITERATURE: Sarre and Trenkwald 1926–29, vol. 2, p. 25, pl. 55; Dimand and Mailey 1973, no. 54, pp. 119–20, 129, fig. 128; Gans-Ruedin 1984, pp. 82–83, pl. 83; New York, *Akbar's India*, 1985, pp. 111–13, fig. 12

TECHNICAL INFORMATION (D. Walker, N. Kajitani):

Warp: white cotton, z8s, alternates very depressed

Weft: buff (pinkish cast) cotton, z3, z4, x 3 (some lazy lines)

Knots: wool, z2, z3, z4, Persian open to the left, 11 horizontal x 10 vertical (110 per square inch)

The Metropolitan Museum of Art, New York; Gift of J. Pierpont Morgan, 1917 (17.190.858)

Figs. 33, 34, pp. 42, 43

5. *Fragment of a carpet with pictorial design*

Northern India, Fatehpur Sikri or Agra, 16th–17th century

2' 10⅝" x 2' 8¼" (88 x 82 cm)

EX COLL.: Friedrich Sarre; acquired by the Textile Museum in 1949 from Mrs. Friedrich Sarre.

LITERATURE: Paris 1903, pl. 84; Martin 1908, p. 98, fig. 231; New York 1963, no. 40, pp. 75, 97, 169; Ellis, "Indian Carpets," 1965, pp. 12–13, fig. 1; K. Erdmann 1970, p. 75, pl. 11; London, *Indian Heritage*, 1982, no. 197, p. 75; Walker 1982, pp. 255–56, fig. 9; Gans-Ruedin 1984, pp. 66–67; Los Angeles, *Taj Mahal*, 1989, pp. 182, 185, fig. 197

EXHIBITIONS: Paris 1903; Munich 1910; New York 1964; London, *Indian Heritage*, 1982; Los Angeles, *Taj Mahal*, 1989–91

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, z6s, alternates moderately depressed

Weft: light beige cotton, z4, x 3 (lazy lines)

Knots: wool, z2, Persian open to the left, 15 horizontal x 14 vertical (210 per square inch)

The Textile Museum, Washington, D.C. (R63.00.13)

Fig. 36, p. 45

6. *Carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1610

25' 1½" x 9' 7¼" (765 x 293 cm)

EX COLLS.: French and Co., New York; acquired by the Museum für Islamische Kunst in 1974 from Hugh Moss Ltd; The Textile Gallery, London.

LITERATURE: Brisch 1975; London, *Eastern Carpet*, 1983, no. 77, pp. 98–99; Spuhler 1987, no. 125, pp. 108–9, 265

TECHNICAL INFORMATION (Spuhler 1987, p. 109):

Warp: white cotton, z9–11s (z2), bundled

Weft: pink cotton, z4, x 3

Knots: wool, z3, Persian, 145 per square inch

Museum für Islamische Kunst, Staatliche Museen zu Berlin—Preussischer Kulturbesitz (1. 6/74)

Figs. 39, 40, pp. 48, 49

7a. *Fragments of a carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1600
16' 4" x 4' 10" (497.8 x 147.3 cm), as assembled

EX COLLS.: Dikran Kelekian, New York; Karekin Beshir (until 1951); acquired by the Textile Museum in 1951.

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, z10s, z11s, alternates very depressed
Weft: pink cotton, z4, some z3, x 3 (some lazy lines)
Knots: wool, z2, z3, z4, z5, Persian open to the left, 10 horizontal x 10 vertical (100 per square inch)
Ends: bottom: plain weave (with wefts), then fringe

The Textile Museum, Washington, D.C. (R63.00.2)
Fig. 41, p. 50

7b. *Fragment of a carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1600
5' 8½" x 3' 3¼" (174 x 99.7 cm)

EX COLL.: Acquired by Howard Hodgkin in the London trade, 1993.

CONDITION: This fragment is itself pieced.

TECHNICAL INFORMATION (D. Walker):
Warp: white cotton, z multistrand (more than 4) s
Weft: pinkish beige cotton, z3, z4, x 3
Knots: wool, z3, z4, Persian open to the left, 10 horizontal x 10 vertical (100 per square inch)

Collection Howard Hodgkin, London
Fig. 43, p. 51

7c. *Fragments of a carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1600
4' 8" x 3' 2¾" (142.2 x 97.5 cm)

EX COLL.: Acquired by Howard Hodgkin in 1977 at auction.

CONDITION: This fragment is itself pieced (but the main border is original to the field).

TECHNICAL INFORMATION (D. Walker):
Warp: white cotton, z8s, alternates depressed
Weft: pink, dull orange or beige cotton, x 3
Knots: 10 horizontal x 12 vertical (120 per square inch)

Collection Howard Hodgkin, London
Fig. 44, p. 51

8. *Carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1610–20
19' 9¾" x 8' (604 x 244 cm)

EX COLL.: Earl of Ilchester, England

LITERATURE: Kendrick and Tattersall 1922, vol. 1, pp. 20, 104, vol. 2, pl. 12; Leeds 1964, no. 36; London, *Eastern Carpet*, 1983, no. 76, p. 98

EXHIBITIONS: Leeds 1964; London, *Eastern Carpet*, 1983

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, z8s, alternates very depressed
Weft: apricot (pinkish) cotton, z3, x 3
Knots: wool, z2, z3, z4, z5, Persian open to the left, 13½ horizontal x 16 vertical (216 per square inch)
Sides: ivory cotton cable (2 warps?), z-plied; red wool overcasting

Private collection

Figs. 45, 46, pp. 52, 53

9. *Carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1610–20
6' 5½" x 4' 6" (197 x 137 cm)

EX COLL.: Acquired by Mr. Kawakatsu Kenichi in 1934 from an auction at the Kyoto Art Club (said to come from a Kyoto merchant house); acquired by the Toyama Memorial Museum from Mr. Kawakatsu on April 4, 1969.

LITERATURE: Toyama 1992, vol. 2, no. 30, p. 211

TECHNICAL INFORMATION (D. Walker):
Warp: white cotton, z6s, alternates depressed
Weft: light brown cotton, z3, x 3
Knots: wool, z2, z3, z4, Persian open to the left, 12 horizontal x 14 vertical (168 per square inch)
Sides: 2 cords of one warp each held by weft-wrapping, overcasting in red wool
Ends: warp twining in red silk (also trace of green) over doubled-back carpet ends; added fringe

The Toyama Memorial Museum, Saitama, Japan (no. 14)
Fig. 47, p. 54

10. *Carpet with pattern of scrolling vines and animals*

Northern India, Lahore, ca. 1620–30
13' 3" x 6' 3¼" (403.5 x 191.2 cm)

EX COLLS.: Duke of Rutland, Belvoir Castle, England; Duveen Brothers, New York and London, sold November 18, 1909 to P. A. B. Widener, Philadelphia; donated to the National Gallery of Art in 1942.



LITERATURE: New York 1910, no. 50, pp. xxxix, 62; Chicago 1947, no. 14; Ellis, "Indian Carpets," 1965, p. 13, fig. 2; London 1976, no. 99, p. 117; London, *Indian Heritage*, 1982, no. 196, pp. 71–75; Beattie, "Widener," 1982, pp. 228–29; Bode and Kühnel 1984, pp. 163, 165, fig. 120; Gans-Ruedin 1984, pp. 62–65; New York, *Akbar's India*, 1985, no. 73, p. 111; Los Angeles, *Taj Mahal*, 1989, p. 179, fig. 196

EXHIBITIONS: New York 1910; Chicago 1947; London 1976; London, *Indian Heritage*, 1982; New York, *Akbar's India*, 1985–86; Los Angeles, *Taj Mahal*, 1989–91

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, 28s, alternates moderately depressed
Weft: pink cotton, 23, x 3 (some lazy lines)
Knots: wool, 22, Persian open to the left, 14 horizontal x 17 vertical (238 per square inch)

National Gallery of Art, Washington, D.C., Widener Collection (1942.9.475)
Figs. 9, 48, pp. 23, 55

11. Medallion carpet

Northern India, Lahore, ca. 1620–30
23' 2½" x 8' 4¾" (706 x 255 cm)

EX COLL.: Acquired by Calouste Gulbenkian in 1921 from the Spanish Art Gallery, London.

LITERATURE: Walker 1982, pp. 255–56, fig. 8; Lisbon, *Tapetes*, 1985, no. 16

EXHIBITION: Lisbon, *Tapetes*, 1985

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, 26s, alternates moderately depressed
Weft: apricot cotton, 23, 24, x 3
Knots: wool, 22, 23, 24, Persian open to the left, 10½ horizontal x 12 vertical (126 per square inch)
Sides: two cables of warps held by wefts

Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon (T 62)
Figs. 56, 57, pp. 62, 63

12. Carpet with pattern of scrolling vines and blossoms

Northern India, Lahore, ca. 1620–30
12' x 5' 10" (366 x 178 cm)

EX COLLS.: Parish Watson and Co.; Mr. and Mrs. Edsel B. Ford, Detroit; donated to the Detroit Institute of Arts in 1929.

LITERATURE: Ellis, "Indian Carpets," 1965, p. 13, fig. 4; Gans-Ruedin 1984, p. 128

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, 29s, alternates moderately depressed
Weft: pale pink cotton, 24, x 3
Knots: wool, 22, 23, 24, Persian open to the left, 12 horizontal x 13 vertical (156 per square inch)
Sides: 2 cords of 2 z-ply warps, held by weft-wrapping; red wool overcasting
Ends: plain-weave band using wefts

The Detroit Institute of Arts, Gift of Mr. and Mrs. Edsel B. Ford (29.242)

Fig. 58, p. 64

13. Medallion carpet

Northern India, Lahore, ca. 1620–30
6' 9" x 4' 5½" (206 x 136 cm)

LITERATURE: Kajitani and Yoshida 1992, no. 8, pp. 54–55; Walker 1992, pp. 186–87; Purdon 1994, p. 88, fig. 1; Osaka 1994, no. 138, pp. 139, 156, 178

EXHIBITION: Osaka 1994

TECHNICAL INFORMATION, results tentative (D. Walker):

Warp: white cotton, probably 26 or 27, alternates depressed
Weft: pink cotton, 22, 23, x 3
Knots: wool, 22, 23, 24, Persian open to the left, 11 horizontal x 10 vertical (110 per square inch)

Gion Matsuri Tsuki-boko Preservation Association, Kyoto
Fig. 59, p. 65

14. Carpet with pattern of scrolling vines and blossoms, known as the Girdlers' carpet

Northern India, Lahore, 1630–32
24' ¼" x 7' 6" (732 x 229 cm)

PROVENANCE: Ordered from Lahore in 1630 and presented by Robert Bell to the Girdlers' Company, London, in 1634.

LITERATURE: Martin 1908, pp. 96–98, fig. 227; Kendrick and Tattersall 1922, vol. 1, pp. 40, 106, vol. 2, pl. 33; London 1950, no. 993, p. 211; Irwin 1956; Irwin 1962; Irwin, "Girdlers," 1965; K. Erdmann 1970, pp. 170, 207–8, fig. 265; Eiland 1979, pp. 141–42, fig. 116; Walker 1982, pp. 253–55, fig. 2; London, *Eastern Carpet*, 1983, pp. 31, 96, fig. 35; Gans-Ruedin 1984, pp. 72–73

EXHIBITION: London 1947–48

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, 29s, 27s, alternates moderately depressed

Weft: beige (pinkish in places) cotton, z3, x 3
Knots: wool, mostly z2, also z3, z4, Persian open to the left, 14 horizontal x 17 vertical (238 per square inch)
Sides: 2 cables of 2 warps z-plied, held by weft return around outer; red wool overcasting
Ends: top: plain-weave band, narrow dark brown stripe, then wider stripe using regular wefts; bottom: plain-weave band, wefts only

The Worshipful Company of Girdlers, London
Figs. 11, 62, pp. 25, 68–69

15. Carpet with pattern of scrolling vines and blossoms

Northern India, Lahore, second quarter of the 17th century
 6' 8" x 4' 5" (203 x 135 cm)

EX COLL.: Senator William A. Clark; bequeathed to the Corcoran Gallery of Art in 1926.

LITERATURE: Corcoran 1932, p. 90

TECHNICAL INFORMATION (D. Walker):
Warp: white cotton, z7s, alternates very depressed
Weft: off-white (slightly reddish) cotton, usually z4s, also z3s, x 3
Knots: wool, z3, z4, occasionally z2, z5, Persian open to the left, 10 horizontal x 10 vertical (100 per square inch)

Collection of the Corcoran Gallery of Art, Washington, D.C., William A. Clark Collection (26.297)
Fig. 64, p. 70

16a. Fragments of a carpet with pattern of scrolling vines and animal heads

Northern India, Lahore, ca. 1610–20
 A5212A: 3' 4½" x 2' 9½" (103 x 85 cm); A5212B: 3' 4½" x 10¾" (103 x 27.5 cm); A5212C: 3' 4½" x 12¾" (103 x 32.5 cm)

EX COLL.: Acquired in 1889 by the Musée des Arts Décoratifs from the Beshiktash Collection.

LITERATURE: Martin 1908, pp. 27, 35, 38, fig. 89; Pope 1938–39, pp. 2359–61, pls. 1172, 1173; K. Erdmann 1960, pp. 106–7, fig. 28; K. Erdmann 1976, p. 57, fig. 171; Zebrowski 1981, pp. 187–88, fig. 212; H. Erdmann 1982, pp. 224–25, 236; London, *Indian Heritage*, 1982, no. 193, p. 74; Paris 1989, no. 218, p. 284; Cohen, "Fearful Symmetry," 1996, pp. 106–8, fig. 3

EXHIBITIONS: London 1931; London, *Indian Heritage*, 1982; Paris 1989–90

TECHNICAL INFORMATION (D. Walker):
Warp: light green (sometimes close to ivory, but no

discernible stripes) silk, z2s, alternates moderately depressed

Weft: red silk, single u, x 3 (some lazy lines)
Knots: wool, z2, some z3, z4 (beige), Persian open to the left (occasional *jufti*), 21 horizontal x 23 vertical (483 per square inch)

NOTE: Undyed beige pile fiber in another field fragment (Museum of Fine Arts, Boston, 05.58) has been identified as camel's hair (see Appendix 1).

Musée des Arts Décoratifs, Paris (A5212A, A5212B, A5212C)
Fig. 66, pp. 72–73

16b. Border fragment of a carpet with pattern of scrolling vines and animal heads

Northern India, Lahore, ca. 1610–20
 2' 7½" x 12½" (80 x 32 cm)

EX COLL.: Acquired by the Nationalmuseum, Stockholm, in 1899 from F. R. Martin.

LITERATURE: Martin 1908, pp. 27, 38, fig. 90; Pope 1938–39, pp. 2359–61, pl. 1212B

TECHNICAL INFORMATION, another border fragment from the same carpet, Burrell Collection, Glasgow Art Gallery and Museum, inv. no. 9/23 (D. Walker):

Warp: yellow (greenish; greener in places, but distinct stripes not discerned) silk, z2s, alternates very depressed
Weft: red silk, single u, x 3
Knots: wool, z2, Persian open to the left, 21 horizontal x 22 vertical (462 per square inch)
Sides: at top right edge wefts seem to wrap around single warp; no cable and no visible overcasting

NOTE: Fragment is probably from right side of carpet.

Nationalmuseum, Stockholm (NMK 153/1899)
Fig. 67, p. 73

16c. Border fragment of a carpet with pattern of scrolling vines and animal heads

Northern India, Lahore, ca. 1610–20
 A5212D: 2' 7½" x 7⅞" (80 x 20 cm)

EX COLL.: Acquired in 1889 by the Musée des Arts Décoratifs from the Beshiktash Collection.

LITERATURE: Martin 1908, pp. 27, 35, 38, fig. 89; Pope 1938–39, pp. 2359–61, pls. 1172, 1173; K. Erdmann 1960, pp. 106–7, fig. 28; K. Erdmann 1976, p. 57, fig. 171; H. Erdmann 1982, pp. 224–25, 236; Paris 1989, no. 218, p. 284; Cohen, "Fearful Symmetry," 1996, pp. 106–8, fig. 3



EXHIBITIONS: London 1931; Paris 1989–90

TECHNICAL INFORMATION (D. Walker):

Warp: light green (sometimes close to ivory, but no discernible stripes) silk, z2s, alternates moderately depressed

Weft: red silk, single u, x 3 (some lazy lines)

Knots: wool, z2, some z3, z4 (beige), Persian open to the left (occasional *juftri*), 21 horizontal x 23 vertical (483 per square inch)

NOTE: Fragment is from one side of the carpet.

Musée des Arts Décoratifs, Paris (A5212D)

Fig. 68, p. 73

17. Fragmentary pashmina carpet with pattern of scrolling vines and blossoms

Northern India, Kashmir or Lahore, ca. 1620–25
18'9½" x 4'1½" (570 x 125 cm)

EX COLL.: Purchased in 1928 by Calouste Gulbenkian from M. Kahyaian, London.

LITERATURE: Lisbon, *Tapetes*, 1985, no. 18; New York, *India*, 1985, no. 153, pp. 232–33

EXHIBITIONS: Lisbon, *Tapetes*, 1985; New York, *India*, 1985–86

TECHNICAL INFORMATION (D. Walker):

Warp: ivory, red, green silk, in bands, z2s, alternates moderately depressed

Weft: red silk, single u, x 3

Knots: pashmina wool, z3, z4, Persian open to the left, 32 horizontal x 24 vertical (768 per square inch)

Ends: plain-weave band using wefts, then fringe

NOTE: Fragment is the left half of the carpet.

Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon (T 72)

Figs. 74, 75, pp. 78, 79

18. Fragments of a pashmina carpet with pattern of scrolling vines and blossoms

Northern India, Kashmir or Lahore, ca. 1650
13'1¼" x 2'6¾" (399.4 x 78.1 cm), as assembled

EX COLL.: Benjamin Altman, New York

LITERATURE: Dimand and Mailey 1973, no. 64, pp. 131–32

TECHNICAL INFORMATION (D. Walker, N. Kajitani):

Warp: ivory, red, light green silk, z2s

Weft: red silk, s3, some s4, x 3

Knots: wool, z4, z5, Persian open to the left, 26 horizontal x 26 vertical (676 per square inch)

The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.719)

Figs. 78, 79, pp. 82, 83

19. Pashmina carpet with niche-and-flower design

Northern India, Kashmir or Lahore, ca. 1630–40
5'17/8" x 3'4" (157 x 102 cm)

EX COLL.S.: F. Engel-Gros (sold at auction, Galeries Georges Petit, Paris, May 30–June 1, 1921, lot 295); acquired by the Paravicini Collection, Cairo, at the Engel-Gros sale; sold in 1963 at auction in Paris to present owner.

LITERATURE: Paris 1921, lot 295, p. 147; K. Erdmann 1976, p. 57, fig. 173; Beattie, "Paravicini," 1982, pp. 220–21, 236; London, *Indian Heritage*, 1982, no. 198, pp. 71, 75; Los Angeles, *Taj Mahal*, 1989, no. 199, pp. 186–88

EXHIBITIONS: London, *Indian Heritage*, 1982; Los Angeles, *Taj Mahal*, 1989–91

TECHNICAL INFORMATION (Beattie, "Paravicini," 1982, p. 221):

Warp: ivory silk, z2s, alternates very depressed

Weft: red silk, s2 or u2, x 3

Knots: pashmina wool, z2s, Persian open to the left, 43 horizontal x 45½ vertical (1,956 per square inch)

Sides: 3 cord singles, red pashmina overcasting

Ends: bottom: light yellow plain-weave band

Private collection

Fig. 88, p. 91

20. Carpet with niche-and-flower design

Northern India, Kashmir or Lahore, ca. 1630–40
5'1" x 3'4½" (155 x 102.8 cm)

EX COLL.S.: Charles Yerkes; Elbert Gary (sold, American Art Association, Anderson Galleries, New York, December 7–8, 1934, lot 403); purchased by Dikran Kelekian, New York, at the Gary sale; Joseph V. McMullan, New York.

LITERATURE: Mumford 1910, pl. IV; New York 1934, lot 403, p. 100; Chicago 1947, no. 74; New York 1963, no. 56, pp. 104, 120, 171; McMullan 1965, pp. 42–43, pl. 7; Dimand and Mailey 1973, pp. 123, 125, fig. 139; Washington, D.C., 1974, no. XXIII, pp. 78–79; Walker 1982, pp. 255–57, fig. 11; Gans-Ruedin 1984, pp. 78–79; Los Angeles, *Taj Mahal*, 1989, pp. 186, 189, fig. 200

EXHIBITIONS: Chicago 1947; New York 1964;

Washington, D.C., 1974–75; Los Angeles, *Taj Mahal*, 1989–91

TECHNICAL INFORMATION (N. Kajitani):

Warp: undyed cotton, z4s

Weft: #1 and #3 undyed cotton, z4; #2 red silk; x 3

Knots: wool, z4, Persian open to the left, 14 horizontal x 14 vertical (196 per square inch)

The Metropolitan Museum of Art, New York; Bequest of Joseph V. McMullan, 1973 (1974.149.2)

Fig. 89, p. 92

21. *Pashmina carpet with niche-and-flower design*

Northern India, Kashmir or Lahore, ca. 1630–40
4' 1" x 2' 11½" (124.5 x 90 cm)

EX COLL.: Édouard Aynard, Lyons

LITERATURE: Paris 1903, pl. 83; Martin 1908, pp. 90, 91, 93, fig. 213; Beattie, *Thyssen-Bornemisza*, 1972, no. ix, pp. 67–72; London 1976, no. 100, pp. 62, 118; Eiland 1979, pp. 139–40, fig. 112; London, *Indian Heritage*, 1982, no. 199, p. 76; London, *Eastern Carpet*, 1983, no. 85, pp. 47, 103; Gans-Ruedin 1984, pp. 114–15; Blair and Bloom 1994, pp. 298–99, fig. 376; Osaka 1994, no. 45, pp. 64–65, 181

EXHIBITIONS: Paris 1903; London 1976; London, *Indian Heritage*, 1982; London, *Eastern Carpet*, 1983; Osaka 1994

CONDITION: Slightly reduced in length; side borders missing

TECHNICAL INFORMATION (Beattie, *Thyssen-Bornemisza*, 1972, no. ix):

Warp: ivory, white, golden yellow, and blue silk, in stripes, z2s, alternates depressed

Weft: crimson silk, u, x 3

Knots: pashmina wool, z6, Persian open to the left, 35 horizontal x 31 vertical (1,085 per square inch)

Carmen Thyssen-Bornemisza Collection on loan to Fundación Colección Thyssen-Bornemisza, Madrid (1990)

Fig. 92, p. 94

22. *Carpet with flower pattern*

Northern India, Kashmir or Lahore, ca. 1650
14' x 6' 7" (426.7 x 200.6 cm)

PROVENANCE: Acquired in 1656 in Lahore by Maharaja Jai Singh I of Amber.

EX COLLS.: Maharaja of Jaipur; Hagop Kevorkian (sold at auction, Sotheby's, London, September 11, 1970,

part II, no. 8); purchased by The Metropolitan Museum of Art at the Kevorkian sale.

LITERATURE: Martin 1908, pp. 100–101, fig. 242; Campbell 1929, no. 162; New York 1966, pl. xiii, no. 28; K. Erdmann 1970, pp. 90–91, fig. 101; London 1970, no. 8; Dimand and Mailey 1973, no. 59, pp. 122, 130, 150–51, fig. 134; Gans-Ruedin 1984, pp. 126–27

EXHIBITION: New York 1966

TECHNICAL INFORMATION (D. Walker, N. Kajitani):

Warp: ivory cotton, z8s, alternates depressed

Weft: light brown (pinkish) cotton, z3s, z4s, x 3

Knots: wool, z2, z3, z4, z5, Persian open to the left, 11 horizontal x 13 vertical (143 per square inch)

Sides: 2 warps weft-wrapped, red silk overcasting
Ends: bottom end still has warp fringe in loops; these have twisted into groups of 2–12 warps.

The Metropolitan Museum of Art, New York; Purchase, Florance Waterbury Bequest and Rogers Fund, 1970 (1970.321)

Figs. 93, 94, pp. 96, 97

23. *Carpet with flower pattern*

Northern India, Kashmir or Lahore, ca. 1650
7' 10½" x 5' 5¾" (240 x 167 cm)

PROVENANCE: Probably acquired by Maharaja Jai Singh I (r. 1622–68) of Amber.

EX COLLS.: Maharaja of Jaipur (transferred to Jaipur from Amber in 1924); Vigo Gallery, London

LITERATURE: Campbell 1929, no. 19

European private collection

Fig. 95, p. 98

24. *Circular carpet with flower pattern*

Northern India, Kashmir or Lahore, ca. 1650
12' 10¼" x 13' 7¼" (392 x 414.6 cm)

PROVENANCE: Acquired in 1655 by Maharaja Jai Singh I of Amber.

EX COLLS.: Maharaja of Jaipur; donated to the Government Central Museum of Jaipur in 1949.

LITERATURE: Martin 1908, pp. 100–101, fig. 241; Campbell 1929, no. 154; London 1950, no. 997, p. 212, pl. 63; K. Erdmann 1960, pp. 112–13, pl. 6

EXHIBITION: London 1947–48

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, z7s, alternates depressed



Weft: #1 and #3 off-white cotton, z2; #2 usually red silk, u, occasionally off-white cotton, z4; x 3
Knots: wool, z2, z3, Persian open to the left,
12 horizontal x 12 vertical (144 per square inch)
Government Central Museum of Jaipur (2227)
Fig. 100, p. 103; not exhibited

25. Shaped carpet with flower pattern

Northern India, Kashmir or Lahore, ca. 1650
14' 8" x 8' 5"; other end: 6' 8½" (447 x 256.5 cm;
other end: 204.5 cm)

PROVENANCE: Probably acquired by Maharaja Jai Singh I (r. 1622–68) of Amber.

EX COLL.: Maharaja of Jaipur; Mrs. Audrey Emery, Cincinnati; donated to the Cincinnati Art Museum in 1952.

LITERATURE: Hendley 1905, pp. 14 (no. 30), 15, pls. 1–xxi; K. Erdmann 1970, p. 199, fig. 254; Walker 1982, p. 253, fig. 1; Cincinnati 1985, no. 62, pp. 84–86; Los Angeles, *Taj Mahal*, 1989, pp. 182–83, fig. 194

EXHIBITIONS: Cincinnati 1985; Los Angeles, *Taj Mahal*, 1989–91

TECHNICAL INFORMATION (D. Walker):
Warp: ivory cotton, z5s, z6s, z7s, alternates moderately depressed

Weft: #1 and #3 beige cotton, z2; #2 beige cotton, z2, or red silk, u; x 3

Knots: wool, z2 or z3, Persian open to the left,
11 horizontal x 15 vertical (165 per square inch)

Sides: overcasting of z2, z3 red wool; in arch: plain weave, no overcasting

Ends: warp fringe

NOTE: Woven with design sideways on the loom.

Cincinnati Art Museum, Gift of Mrs. Audrey Emery (1952.201)

Fig. 101, p. 104

26. Pashmina carpet with pattern of lattice and flowers

Northern India, Kashmir or Lahore, ca. 1650
9' ¼" x 8' 11⅞" (275 x 274 cm)

CONDITION: Reduced in length.

TECHNICAL INFORMATION, fragment from same carpet, private collection (N. Kajitani):

Warp: green, white, red silk, z2s, alternates moderately depressed

Weft: red silk, u, x 3

Knots: pashmina wool, Persian knot open to the left,
21 horizontal x 24 vertical (504 per square inch)

Private collection

Fig. 104, frontispiece; p. 106

27. Fragment of a pashmina carpet with pattern of lattice and flowers

Northern India, Kashmir or Lahore, ca. 1650
4' 8" x 2' 11" (142 x 89 cm)

EX COLL.: George Salting, London; donated to the Victoria and Albert Museum in 1910.

LITERATURE: Martin 1908, pp. 92, 97, fig. 220; Kendrick and Tattersall 1922, vol. 1, pp. 39, 106, vol. 2, pl. 32; Eiland 1979, pp. 134, 138, fig. 109; London, *Indian Heritage*, 1982, no. 200, p. 76; London, *Eastern Carpet*, 1983, no. 82, p. 102; Gans-Ruedin 1984, pp. 136–37

EXHIBITIONS: London, *Indian Heritage*, 1982; London, *Eastern Carpet*, 1983

TECHNICAL INFORMATION (Eiland 1979, p. 134, no. 109):

Warp: red, green, white silk, in stripes, 2 strands, alternates depressed

Weft: red silk, x 3

Knots: wool, z2s, Persian open to the left, 23 horizontal x 26 vertical (598 per square inch)

Trustees of the Victoria and Albert Museum, London (T. 403-1910)

Fig. 105, p. 107; not exhibited

28. Pashmina carpet with pattern of lattice and flowers

Northern India, Kashmir or Lahore, ca. 1650
9' 10" x 4' 1" (300 x 124.5 cm)

PROVENANCE: Probably acquired by Maharaja Jai Singh I (r. 1622–68) of Amber.

EX COLL.: Maharaja of Jaipur; donated to the Maharaja Sawai Man Singh II Museum, Jaipur, in 1961.

LITERATURE: Campbell 1929, no. 60; Walker 1982, pp. 256–57, fig. 12; Gans-Ruedin 1984, pp. 104–5

TECHNICAL INFORMATION (D. Walker):

Warp: red and ivory silk in stripes, z3s, alternates depressed

Weft: red silk, u, x 3

Knots: pashmina wool, z3, some z2, z4, Persian open to the left, 20 horizontal x 23 vertical (460 per square inch)

Sides: 2U red silk overcasting over outer 2 (or 2 pairs of) warps

Maharaja Sawai Man Singh II Museum, Jaipur (C-15)
Fig. 106, p. 108

29. *Fragments of a pashmina carpet with pattern of lattice and blossoms*

Northern India, Kashmir or Lahore, ca. 1650
13' 8¼" x 5' 3¾" (417.2 x 161.9 cm), as assembled

EX COLL.: Benjamin Altman, New York.

LITERATURE: Sarre and Trenkwald 1926–29, vol. 2, p. 25, pl. 58; Dimand and Mailey 1973, no. 60, pp. 122–23, 130, fig. 136; Ellis 1982, pp. 230–31

TECHNICAL INFORMATION (N. Kajitani):

Warp: red, ivory, and green silk in stripes, z2s, alternates very depressed

Weft: red silk, u, x 3

Knots: wool, z4, Persian open to the left, 33 horizontal x 31 vertical (1,023 per square inch)

The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.723)
Figs. 109, 110, pp. 110, 111

30. *Fragments of a pashmina carpet with pattern of lattice and blossoms*

Northern India, Kashmir or Lahore, ca. 1650
4' 9" x 13' 6" (144.8 x 411.8 cm), as assembled

EX COLLS.: Benjamin Altman, New York (five fragments); Michael Friedsam (smallest fragment)

LITERATURE: New York 1910, no. 47, pp. xl, 59; Dimand and Mailey 1973, no. 61, pp. 122–24, 130–31, fig. 137

EXHIBITION: New York 1910 (Altman fragments)

TECHNICAL INFORMATION (D. Walker, N. Kajitani):

Warp: white, red, light green, yellow, blue silk, z2s, alternates depressed

Weft: red silk, s, x 3

Knots: pashmina wool, z4, z5, z6, Persian open to the left, 23½ horizontal x 15½ vertical (364 per square inch)

The Metropolitan Museum of Art, New York; Bequest of Benjamin Altman, 1913 (14.40.712). (Smallest fragment): The Metropolitan Museum of Art, New York; The Friedsam Collection, Bequest of Michael Friedsam, 1931 (32.100.457)
Figs. 111, 112, pp. 112, 113, 114

31. *Fragment of a pashmina carpet with pattern of lattice and blossoms*

Northern India, Kashmir or Lahore, ca. 1650
10' 6" x 4' 7" (320 x 140 cm)

EX COLL.: Acquired by Calouste Gulbenkian in 1922 from Georges Demotte, Paris.

LITERATURE: Lisbon, *Reservas*, 1985, no. 22

EXHIBITION: Lisbon, *Reservas*, 1985

CONDITION: This piece is made up of fragments.

TECHNICAL INFORMATION (D. Walker):

Warp: ivory, red, green silk, z2s, alternates moderately depressed

Weft: red silk, u, x 3

Knots: pashmina wool, z4, z5, Persian open to the left, 25 horizontal x 26 vertical (650 per square inch)

Museu Calouste Gulbenkian, Calouste Gulbenkian Foundation, Lisbon (T60)
Fig. 113, p. 115

32. *Carpet with pattern of lattice and blossoms*

Northern India, Kashmir or Lahore, second half of the 17th century
15' 3" x 14' 4" (464.8 x 436.9 cm)

EX COLLS.: French and Co., New York (as of 1947); acquired by present owner at auction, Sotheby's, New York, April 10–11, 1981, lot 516.

LITERATURE: Chicago 1947, no. 1; New York 1981, lot 516; Franses and Pinner 1982, pp. 232–33

EXHIBITION: Chicago 1947

CONDITION: Reduced in length.

Private collection

Fig. 114, p. 116

33. *Durbar carpet with medallion design*

The Deccan, second half of the 17th century
52' 4" x 10' 8" (1,596 x 325 cm)

EX COLLS.: Hagop Kevorkian, New York (sold at auction, Sotheby's, London, December 11, 1970, lot 11); purchased by John Hewett, London, from the Kevorkian sale; sold to a private collection; subsequently acquired by present owner.

LITERATURE: New York 1966, no. 23, pl. xi; London 1970, no. 11; London, *Eastern Carpet*, 1983, no. 81, pp. 48,



101; Bennett 1985, pp. 131–32; Cohen, "Textiles," 1986, pp. 120, 127–28, fig. 16

EXHIBITIONS: New York 1966; London, *Eastern Carpet*, 1983

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, z3s, alternates depressed

Weft: red-brown cotton, z2, z3, x 3

Knots: wool, z2, Persian open to the left, 14 horizontal x 14 vertical (196 per square inch)

Private collection

Figs. 119, 120, pp. 122, 123

34. *Pashmina carpet with millefleur pattern*

Northern India, Kashmir or Lahore, second half of the 17th century

6' 10³/₄" x 4' 10" (210 x 147.3 cm)

EX COLLS.: Henry Marquand (sold at auction, American Art Association, New York, January 23, 1903, lot 1284); French and Co., New York; G. Farrow.

LITERATURE: New York 1903, lot 1284; Leeds 1964, no. 39; London, *Indian Heritage*, 1982, no. 204, p. 76

EXHIBITIONS: Leeds 1964; London, *Indian Heritage*, 1982

TECHNICAL INFORMATION (Leeds 1964, no. 39):

Warp: ivory, red, yellow, green silk, in stripes, z(?)s, alternates depressed

Weft: red silk, z2, x 3

Knots: pashmina wool, z5, Persian, 26¹/₂ horizontal x 25¹/₂ vertical (675 per square inch)

Sides: red silk overcasting

Ends: top: plain-weave band using wefts; bottom: plain-weave band using wefts, traces of elaborately pleated silk warp fringe

Ashmolean Museum, Oxford (EA 1975.17)

Fig. 123, p. 126

35. *Pashmina carpet with niche-and-millefleur pattern*

Northern India, Kashmir, first half of the 18th century

5' 1" x 3' 6" (155 x 107 cm)

EX COLL.: Purchased by the Österreichisches Museum für Angewandte Kunst in 1867 from the Mekhitarist Monastery, İzmir.

LITERATURE: Vienna 1892–93, vol. 5, part 9, p. 2, pl. LXXXIV; Martin 1908, pp. 98, 101, fig. 238; Munich 1912, no. 173, p. v, pl. 81; Bode and Kühnel 1922, p. 30, fig. 52; Sarre and Trenkwald 1926, vol. 1, p. 12, pl. 37; Eiland 1979, pp. 140–41, fig. 113; Bode and Kühnel 1984,

pp. 163, 166, fig. 121; Gans-Ruedin 1984, pp. 80–81; Bennett 1986, p. 17

EXHIBITIONS: Vienna 1891; Munich 1910

TECHNICAL INFORMATION, results tentative (D. Walker):

Warp: ivory, yellow, red, medium blue, light blue silk, z2s, alternates moderately depressed

Weft: ivory silk, single u, x 3

Knots: pashmina wool, z2, z3, z4, Persian open to the left, 20 horizontal x 19 vertical (380 per square inch)

Österreichisches Museum für Angewandte Kunst, Vienna (T-1539)

Fig. 128, p. 131

36. *Pashmina carpet with niche-and-millefleur pattern*

Northern India, Kashmir, second half of the 18th century

6' 2¹/₄" x 4' (188.6 x 121.9 cm)

EX COLLS.: M. Bela de Rakovsky; Benguiat Collection (sold at auction, American Art Association, New York, 1926, lot 73); acquired by French and Co., New York, at the Benguiat sale; Joseph V. McMullan, New York.

LITERATURE: Paris 1903, pl. 85; New York 1926, lot 73, p. 38; McMullan 1965, no. 30, pp. 134–35; Dimand and Mailey 1973, pp. 88, 91, fig. 124; Dartmouth 1991, no. 27c, p. 92

EXHIBITIONS: Paris 1903; Dartmouth 1991–92

TECHNICAL INFORMATION (E. Stein):

Warp: ivory cotton, z4s, alternates very depressed

Weft: ivory (especially at ends), some blue cotton, z2, x 3

Knots: pashmina wool, z3, z4, z5, Persian open to the left, 26 horizontal x 27 vertical (702 per square inch)

Sides: three warps held by weft-wrapping

The Metropolitan Museum of Art, New York; Gift of Joseph V. McMullan, 1970 (1970.302.7)

Fig. 129, p. 132

37. *Multiple-niche prayer carpet* (saph)

The Deccan, probably Warangal, 18th century

18' 1" x 4' 7" (551.2 x 139.7 cm)

EX COLLS.: French and Co., New York (as of 1958); sold at auction, Lefevre and Partners, London, October 6, 1978, lot 52.

NOTE: Woven with design sideways on the loom.

Private collection

Figs. 130, 131, pp. 134, 135

38. *Multiple-niche prayer carpet (saph)*

The Deccan, probably Warangal, 18th century
16' 2" x 4' (492.8 x 122 cm)

EX COLL.: Sold at auction, Sotheby's, London,
April 18, 1984, lot 210.

LITERATURE: Cohen, "Textiles," 1986, pp. 120, 122,
fig. 6

CONDITION: The carpet is incomplete.

TECHNICAL INFORMATION (D. Walker):

Warp: white cotton, 24s, alternates slightly depressed
Weft: white, some off-white, light brown cotton, 22, x 3
Knots: wool, 22, Persian open to the left, 8 horizontal x 8
vertical (64 per square inch)
Sides: cable of 3 unplied warps, held by weft-wrapping;
overcast in white/off-white cotton

NOTE: Woven with design sideways on the loom.

The Marshall and Marilyn R. Wolf Collection,
New York

Figs. 132, 133, pp. 136, 137

39. *Carpet with pattern of scrolling vines and blossoms*

The Deccan, ca. 1770
5' 9" x 4' 4³/₄" (175 x 134 cm)

PROVENANCE: Purchased by the Kanko-boko
Association in 1773.

LITERATURE: Kajitani and Yoshida 1992, no. 17x,
pp. 60–61; Walker 1992, p. 179

CONDITION: Carpet cut into halves for display on
float during Gion procession.

TECHNICAL INFORMATION, results tentative
(D. Walker):

Warp: white cotton, 24(?)s, alternates moderately
depressed
Weft: light brown cotton, 22(?), x 3
Knots: wool, 22, Persian open to the left, 7½ horizontal
x 7 vertical (52 per square inch)

Gion Matsuri Kanko-boko Preservation Association,
Kyoto

Fig. 135, p. 139

40. *Carpet with pattern of lattice and flowers*

The Deccan, ca. 1750 or earlier
10' 5½" x 4' 2" (319 x 127 cm)

PROVENANCE: Acquired and repaired by the Kita-
Kannon-yama Association in August 1752.

LITERATURE: Kajitani and Yoshida 1992, no. 23,
pp. 62–63; Walker 1992, p. 181

TECHNICAL INFORMATION, results tentative
(D. Walker):

Warp: white cotton, 210s, alternates not depressed
Weft: medium brown cotton, 52, x 3
Knots: wool, 22, Persian open to the left, 4 horizontal
x 5 vertical (20 per square inch)
Sides: cord held by weft-wrapping, overcast with red wool

Gion Matsuri Kita-Kannon-yama Preservation
Association, Kyoto

Fig. 136, p. 140

41. *Carpet with pattern of lattice and blossoms*

The Deccan, late 18th century
7' 11½" x 4' 1½" (243 x 126 cm)

PROVENANCE: Acquired by the Minami-Kannon-
yama Association prior to 1814.

LITERATURE: Kajitani and Yoshida 1992, no. 22,
pp. 62–63; Walker 1992, p. 183

TECHNICAL INFORMATION, results tentative
(D. Walker):

Warp: white cotton, 27s, 28s, alternates moderately
depressed
Weft: blue cotton, 25 or 26, x 3
Knots: wool, 22, Persian open to the left, 6 horizontal x 8
vertical (48 per square inch)

Gion Matsuri Minami-Kannon-yama Preservation
Association, Kyoto

Fig. 137, p. 141

42. *Carpet with pattern of scrolling vines and
blossoms*

The Deccan, ca. 1650
18' 4" x 6' 10" (559 x 208 cm)

LITERATURE: Bennett and Franses, "Boughton," 1992,
p. 117, pl. 66; Bennett and Franses, "Buccleuch," 1992,
p. 101, fig. 12

TECHNICAL INFORMATION (D. Walker):

Warp: ivory cotton, 27s, alternates very depressed
Weft: buff cotton, 23 or 24, x 3
Knots: wool, 22, Persian open to the left, 8 horizontal x 8
vertical (64 per square inch)
Ends: top: plain-weave band, warp fringe; bottom: plain-
weave band, warp fringe in uncut loops



His Grace, the Duke of Buccleuch and Queensberry K.T.,
Boughton House, Northamptonshire, England (62-506)
Figs. 140, 141, pp. 144, 145

Dar al-Athar al-Islamiyyah, Kuwait Museum of Islamic
Art (LNS 20R)
Fig. 143, p. 148

43. *Fragment of a silk carpet with pattern of lattice
and blossoms*

The Deccan, probably Hyderabad, late 17th or early
18th century
6' 2 $\frac{3}{4}$ " x 4' 3" (190 x 130 cm)

EX COLL.: Julius Orendi, Vienna; John Eskenazi,
Milan (as of 1982).

LITERATURE: Orendi 1930, vol. 1, p. 177, vol. 2,
pl. 894; Milan 1982, pp. 48-49, 60, 62-63, 95, pl. 35;
Jenkins 1983, p. 145

EXHIBITION: Milan 1982

CONDITION: Fragment is from lower right quarter
of carpet.

TECHNICAL INFORMATION (Milan 1982, no. 35):
Warp: ivory silk, s9, alternates moderately depressed
Weft: brown goat's hair, z4, x 3
Knots: silk, 3 yarns, Persian open to the left, 202 per
square inch

44. *Silk carpet with pattern of lattice and
blossoms*

The Deccan, probably Warangal, dated 1192 A.H./
A.D. 1778-79
6' 1 $\frac{1}{4}$ " x 3' 3 $\frac{3}{8}$ " (186 x 100 cm)

EX COLL.: Charles D. Kelekian, New York

TECHNICAL INFORMATION, results tentative
(D. Walker):

Warp: ivory cotton, z9s, z11s, alternates moderately
depressed

Weft: light brown (pink near bottom) cotton, z3, x 2

Knots: silk, single u, Persian open to the left,
18 horizontal x 24 vertical (432 per square inch)

Sides: single warps, weft-wrapped, to edges

Ends: bottom: plain-weave band of pink cotton, then
fringe

Cincinnati Art Museum, Gift of Beatrice Kelekian in
memory of Charles Dikran Kelekian (1985.398)

Fig. 144, p. 149

Notes

Introduction (pp. xv–xviii)

1. London, *Jail Birds*, 1987.
2. Walker 1982, pp. 254, 256–57.
3. Beattie, *Thyssen-Bornemisza*, 1972, p. 39ff.
4. Ellis 1988, nos. 59–63, p. 211ff.
5. Kajitani and Yoshida 1992.

1: India During the Mughal Era (pp. 3–14)

1. See, among others, Martin 1908, p. 88; Kendrick and Tattersall 1922, vol. 1, p. 37; Bode and Kühnel 1958, p. 161; Irwin 1966, p. 20; Beattie, *Thyssen-Bornemisza*, 1972, p. 65; and Ellis 1988, p. 211.
2. These and other pre-Akbari sources are discussed succinctly in Cohen 1987, pp. 119–20, and more fully in Cohen, “Development,” 1986.
3. Ibn-Baṭṭūṭa 1929, pp. 227–28, 198–99, 189.
4. Elliot and Dowson 1976, vol. 5, p. 7.
5. *Ibid.*, vol. 5, pp. 112–13.
6. Begam 1989, p. 118.
7. Serjeant 1972, p. 95 n. 86.
8. See Cohen 1987, pp. 122, 125.
9. Barbosa 1918, vol. 1, pp. 129–30.
10. Ibn-Baṭṭūṭa 1929, pp. 228–29.
11. Barbosa 1918, vol. 1, p. 141.
12. Smart 1981.
13. A good discussion of the imperial workshops at Fatepur Sikri may be found in New York, *Akbar's India*, 1985, pp. 107–21.
14. Abū'l Faḏl 1977, vol. 1, p. 12.
15. Monserrate 1922, p. 201.
16. Abū'l Faḏl 1977, vol. 3, p. 430.
17. Correia-Afonso 1980, p. 81.
18. This is clear from later sources such as Pelsaert 1925, p. 60, and Bernier 1916, p. 254ff.

19. Abū'l Faḏl 1977, vol. 1, p. 55.
20. *Tarīkh-i Akbari*, as cited in Brand and Lowry 1985, pp. 102–3.
21. Abū'l Faḏl 1977, vol. 1, p. 57.
22. *Ibid.*, vol. 1, pp. 93–94.
23. *Ibid.*
24. Abū'l Faḏl 1869, pp. 52–55.
25. Platts 1983, p. 914.
26. Ralph Fitch in Foster 1921, p. 18.
27. *Records of Fort St.-George: Diary and Consultation Book, 1679–80* (Madras, 1912), p. 100; cited in Irwin 1966, p. 41.
28. *Tuzuk* 1974, vol. 1, pp. 50, 149.
29. Pelsaert 1925, p. 9.
30. *English Factories in India, 1618–1621*, p. 168.
31. Pelsaert 1925, pp. 6–8, 31.
32. Irwin 1966, p. 20.
33. Roe 1926, p. 96.
34. *Letters Received*, vol. 6 (1617: July to December), pp. 249–50.
35. Pyrard 1887–90, vol. 2, p. 248; Irwin 1966, p. 18.
36. Pelsaert 1925, p. 19.
37. Pelsaert 1925, p. 7; *English Factories in India, 1618–1621*, p. 195.
38. Pyrard 1887–90, vol. 1, p. 328.
39. Mundy 1907–36, vol. 2 (1914), p. 213.
40. Williamstown 1978, p. 71ff.
41. Islam 1982, pp. 318–19.
42. *Tuzuk* 1974, vol. 2, pp. 147–48.
43. Watt 1903, p. 432.
44. The Persian pieces are vase carpets or Indo-Persians. The origin of the latter is controversial but even those who argue for an Indian provenance have yet to propose Kashmir as a source.
45. Singh 1979, p. x, n. 10.

46. Begley and Desai 1990, p. 501.
47. Tavernier 1889, vol. 2, pp. 3, 27.
48. Hendley 1905, pp. 7–8.
49. Campbell 1929. The report by A. J. D. Campbell is on file at the Victoria and Albert Museum, London. References to “Campbell numbers” throughout this catalogue are to this report.
50. Beattie, “List of Oriental Carpets,” 1972.
51. This material, differing slightly from readings contained in the Campbell report, has been utilized for the present study but is too lengthy and specialized in nature to be included in this publication. It will be incorporated in a projected catalogue raisonné of Indian carpets to be compiled by the author and others.
52. Bernier 1916, p. 254ff.
53. Manucci 1907, vol. 2, p. 424.
54. Bernier 1916, p. 384; Tavernier 1889, vol. 1, p. 95.
55. See note 27.
56. English *Factories in India*, 1642–1645, pp. 60, 63, 66.
57. Mundy 1907–36, vol. 2 (1914), p. 366.
58. Ydema 1991, p. 78.
59. Ydema 1986, pp. 183, 205.
60. Kajitani and Yoshida 1992, no. 9, p. 55.
61. Ydema 1991, especially the diagrams on pp. 96–97.
62. Ydema 1991, p. 79.

2: *International Commerce* (pp. 15–20)

1. Hendley 1905, pls. 1–xxi.
2. *Letters Received*, vol. 1 (1602–13), p. 26.
3. *Letters Received*, vol. 2 (1613–15), p. 136.
4. Irwin 1966, p. 20.
5. *English Factories in India*, 1618–1621, p. 161.
6. *Ibid.*, p. 168.
7. *Ibid.*, pp. 235, 326.
8. *English Factories in India*, 1622–1623, p. 24; *English Factories in India*, 1624–29, p. 93.
9. *English Factories in India*, 1624–29, p. 209; *English Factories in India*, 1630–1633, p. 126.
10. Ydema 1991, p. 79.
11. Roe 1926, pp. 351–52.
12. *Ibid.*, p. 351 n. 1.
13. *English Factories in India*, 1630–1633, p. 277, and *English Factories in India*, 1634–1636, p. 62; see also Irwin 1962.
14. Irwin, “Fremlin,” 1965.
15. Thornton 1978, p. 146.
16. The painting is now at Ockinton Manor, a country-house hotel. I am grateful to Michael Franes for bringing this picture to my attention.
17. “Two great Turkie work Carpetts” are first referred to in a Ham House inventory of 1677; see Thornton and Tomlin 1980.

3: *Technical Characteristics* (pp. 21–28)

1. Abū’l Faḥl 1977, vol. 1, p. 97.
2. Datta 1970, p. 18.
3. Irwin 1973, pp. 4–6.
4. Singh and Ahivasi 1981, pp. 4–5.
5. *Ibid.*, p. 1 n. 12.
6. Abū’l Faḥl 1977, vol. 1, p. 98.
7. *Tuzuk* 1974, vol. 2, p. 148.
8. Whiting 1978.
9. In 1984, Nobuko Kajitani and Daniel Walker selected eight Indian and Persian carpets from the collections of their respective employers, The Metropolitan Museum of Art and the Cincinnati Art Museum, and from a private collection, for dye analysis. Samples were sent to Dr. L. Masschelein-Kleiner at the Koninklijk Instituut voor het Kunstpatrimonium, Brussels, and a report was issued by Dr. J. Wouters on April 24, 1985. The following year twenty-two Indian and Persian carpets from the Metropolitan Museum’s collection and a private collection were chosen, again by Nobuko Kajitani and the author, for dye analysis by Dr. Wouters and Won Ng, textile conservator at the Metropolitan Museum working under a Museum Travel Grant. This report was completed in October 1986. In both instances the method employed was high-performance liquid chromatography (HPLC).
10. Rogers 1983, p. 54ff.
11. Roe 1926, pp. 486–88.
12. But note two Deccani exceptions with Turkish knots; see chapter 4, note 170.

4: *The Carpets* (pp. 29–150)

1. At least thirty-seven, if one includes the garden carpet now in the collection of the Government Central Museum of Jaipur. Most of these are carpets of the Indo-Persian class.
2. Walker 1990, pp. 869–70.
3. *Ibid.*, p. 870.

4. All fifteen fragments are illustrated in color and discussed in Cohen, "Fearful Symmetry," 1996.
5. Cohen, "Fearful Symmetry," 1996, and Sindermann 1995.
6. Sindermann 1995, pp. 25–26; Cohen, "Fearful Symmetry," 1996, pp. 118–20.
7. Burrell Collection, Glasgow, inv. no. 1934/9/1; published in Cohen, "Fearful Symmetry," 1996, p. 119, pl. G.
8. London, *Bernheimer*, 1996, lot 74.
9. Cohen, "Fearful Symmetry," 1996, pp. 125–28.
10. *Ibid.*, pp. 129–35.
11. Musée du Louvre, Paris, inv. no. 7225a; published in Cohen, "Fearful Symmetry," 1996, p. 107, pl. A.
12. Other examples may be seen in an unpublished copy of the *Ramayana* (dated 1584–1588), collection of the maharaja of Jaipur, AG 1855, 1856, 1902, 1903–4, 1942, 1992.
13. This represents a change from the view expressed in Walker 1982, p. 255, resulting from the persuasive arguments put forth by Cohen and by Stuart Cary Welch in New York 1964, p. 165, and in New York, *India*, 1985, pp. 159–60.
14. For another version, see the Dyson-Perrins *Khamisa* of Nizami, British Library, London, inv. no. OR. 12208, fol. 82a, signed by 'Abd al-Šamad; published in Brown 1924, pl. xxxvi. A close, later version is in the Chester Beatty *Akbarnāma*, about 1604; published in Arnold 1936, vol. 2, pl. 25.
15. Stutley 1985, pp. 45, 49, 129; Coomaraswamy 1930, pp. 90–93.
16. Codrington 1931, pl. III D. A variation on this, featuring just the fantastic bird and elephants, is found in a communion table in the Victoria and Albert Museum, London; see Codrington 1931, pl. III A.
17. Museum of Fine Arts, Boston, inv. no. 25.51, published in Coomaraswamy 1930, no. CCXCVII, pl. LXXIII.
18. Nath 1976, pp. 49–53, pl. XIX.
19. Walker 1990, p. 869.
20. Musée des Arts Décoratifs, Paris, inv. no. 10615; published in Paris 1989, no. 225.
21. Musée du Louvre, Paris, inv. no. 6741; published in Sarre and Trenkwald 1926–29, vol. 2, pl. 40.
22. See, for example, the Kāshān rug in the Metropolitan Museum, New York, inv. no. 14.40.721, published in Walker 1994, p. 104, fig. 1; for Sanguszko, collection of the Duke of Buccleuch, Northamptonshire, England, published in Bennett and Franses, "Boughton," 1992, pl. 63.
23. Numerous paintings from the *Hamzanāma* show a simplified version of this pattern; see *Hamzanāma* 1974, vol. 1, pls. v.1, v.18, v.21, v.33, v. 45.
24. Inv. no. R63.00.1.
25. Inv. no. R63.00.24.
26. Gascoigne 1971, pp. 174–75.
27. (1) Textile Museum, Washington, D.C., inv. no. R63.00.2; (2, 3) Collection of Howard Hodgkin, London (2 fragments); (4, 5) Private collection, Paris (2 fragments); (6) Wher Collection, Switzerland, no. 14685; (7) Brooklyn Museum, New York, inv. no. 45.66.4; (8, 9) Calico Museum of Textiles, Ahmadabad, inv. no. 2733, 2762; (10–15) Jaipur Collection, Campbell nos. 98, 106, 107, 111, 112, 113.
28. For a painting by 'Abd al-Šamad of about 1585, and references to a later version by Nanha of 1608–9 and to the Persian painting by Bihzad of about 1525, which was in Akbar's collection and served as a model for the Indian paintings, see New York, *Akbar's India*, 1985, no. 58, pp. 92, 93, 151. Fighting camels are also depicted in an unpublished Indian carpet in the Calico Museum, Ahmadabad (no. 2751), and in a badly damaged Persian fragment of the Sanguszko class in Berlin; see Pope 1938–39, vol. 6, pl. 1213.
29. Irwin 1976 and London, *Eastern Carpet*, 1983, p. 31.
30. A number of leaves of the Dyson-Perrins *Khamisa* of Nizami, British Library, London, inv. no. OR. 12208, have margins incorporating lions or tigers directly facing the viewer.
31. Staatsbibliothek zu Berlin, Orientabteilung, *Libri picturati* A 117, fol. 22b.
32. Walker 1990, p. 873.
33. Kestner Museum, Hannover, inv. no. 5422; published in H. Erdmann 1966, no. 57. A related pattern is found on a Mughal tile; see London, *Indian Heritage*, 1982, no. 5.
34. Walker 1992 and Purdon 1994.
35. Campbell no. 28.
36. Formerly in the Jaipur Collection, Campbell no. 128.
37. Pope 1938–39, vol. 6, pl. 1212A.
38. Best discussed in Irwin 1962; also London, *Eastern Carpet*, 1983, p. 31.
39. Bennett and Franses, "Buccleuch," 1992, pp. 99, 101, fig. 11.
40. The Metropolitan Museum of Art, New York, inv. no. 17.190.857 (figures 54 and 55), has a similar field pattern of repeating units of palmettes and diagonal segmented leaves, as does a piece in Coimbra in the Museu Machado da Castro (inv. no. unknown). Both of these carpets have interlocking-compartment borders based on the Herāt type. For a border in a Lahore carpet similar to the Kinghorne's, see London, *Bernheimer*, 1996, lot 2.
41. Museum of Fine Arts, Boston, inv. no. 05.58, unpublished.



42. Inv. no. 9/23; published in H. Erdmann 1982, pp. 224–25.
43. Inv. no. 5428, published in H. Erdmann 1966, no. 4.
44. H. Erdmann 1982, pp. 224, 237 n. 5.
45. The author closely examined the Paris fragments in 1990 and 1993, the Boston fragment in 1980, and the Burrell piece in 1993.
46. Thompson 1993, pp. 106–8; Martin 1908, pp. 35, 38, fig. 89.
47. Los Angeles, *Timur*, 1989, no. 26, p. 99; no. 44a, p. 128; no. 147, p. 265; and *Islamic World* 1987, pp. 92–93.
48. For the “talking tree,” see Grabar and Blair 1980, no. 38, pp. 132–33; for Zaqqūm, see *Mi‘rājnāma* 1977, pl. 45.
49. One is a fragment in the Benaki Museum, Athens (inv. no. 16147), published in Los Angeles, *Timur*, 1989, no. 119, pp. 220–21, 353. The other is a Northwest Persian medallion carpet in the Museum of Fine Arts, Boston (inv. no. 65.595), published in Denny 1978, p. 157, fig. 2.
50. Los Angeles, *Timur*, 1989, no. 44a, p. 128.
51. New York, *Akbar’s India*, 1985, p. 91; no. 57, pp. 150–151.
52. Briggs 1940.
53. The Metropolitan Museum of Art, New York, inv. no. 1983.494.5, unpublished.
54. Campbell nos. 163, 209.
55. This development was recognized by Robert Skelton in Skelton 1972.
56. *Tuzuk* 1974, vol. 2, pp. 143–44.
57. *Ibid.*, vol. 2, p. 145.
58. The tulip was published in New York, *India*, 1985, no. 145; the iris, in Godard 1937, pp. 273–74, fig. 113; the narcissus is unpublished.
59. Skelton 1972; Rich 1987.
60. For example, the leucoium; see Rich 1987.
61. The very damaged piece in the Textile Museum, Washington, D.C. (inv. no. R.63.00.22), illustrated in figure 7, is slightly finer with almost 2100 knots per square inch.
62. Museum of Fine Arts, Boston, inv. no. 08.388a,b.
63. The Boston Museum of Fine Arts fragment is inv. no. 04.111; unpublished. The Washington fragments are discussed in Ellis, “Compartment,” 1965, pp. 43–47, figs. 1, 2.
64. Beattie, *Thyssen-Bornemisza*, 1972, pp. 67–68. Since this rug was woven upright on the loom, if it was a *saph* or *qanāt* it was probably made up of joined pieces. Otherwise, it would have been made with its design sideways on the loom, like the *saphs* discussed on p. 129ff.
65. *Ibid.*, p. 68.
66. For a painting in Berlin showing the emperor Jahāngīr at prayer in a mosque, see *Hali* 68 (April–May 1993), p. 121 (“Album Leaves”).
67. London 1990, p. 73.
68. Abū’l Faḡl 1977, vol. 1, p. 57.
69. New Delhi 1997, pls. 5, 11, 39; Welch 1978, pls. 31, 32.
70. Abū’l Faḡl 1977, vol. 1, p. 574.
71. Campbell no. 162.
72. Campbell no. 19.
73. Campbell nos. 165 and 166, 158 and 164.
74. Dimand 1977, pp. 278–79.
75. Inv. no. 83.119; unpublished.
76. Campbell no. 67.
77. Textile Museum, Washington, D.C., inv. nos. R63.00.12 and 1969.11.8; Rijksmuseum, Amsterdam, inv. no. RBK 1962–10; Metropolitan Museum of Art, New York, inv. no. 1983.494.6; New York, *Oriental and European Carpets*, 1993, lot 1.
78. Campbell nos. 160, 163.
79. Campbell no. 42.
80. Campbell no. 161, purchased in 1656, along with others.
81. Gulbenkian Museum inv. no. T68, published in Lisbon, *Reservas*, 1985, no. 23; the Blau carpet was published in New York 1932, lot 23, pp. 30–31.
82. Ellis 1982, p. 231; see also Dimand 1977, pp. 274–77.
83. Fragments are widely dispersed and include seven pieces in the Victoria and Albert Museum, London; five pieces in the Museum für Islamische Kunst, Berlin; five fragments in the Textile Museum, Washington, D.C.; one piece in The Metropolitan Museum of Art, New York; and at least two fragments in private collections.
84. Ellis 1982, p. 231.
85. London, *Islamic Art*, 1996, lot 331; one portion was previously published by Irwin 1956, p. 155.
86. Inv. nos. R63.00.11A and B.
87. Campbell no. 154.
88. Calico Museum, Ahmadabad, inv. no. 2767; Campbell no. 22.
89. Begam 1989, p. 118.
90. The Cincinnati piece was in Jaipur in 1905 when Hendley’s volume on the Jaipur carpets was published but was gone by the time of Campbell’s visit.
91. Campbell nos. 25, 121–25, 171, 176.

92. Campbell no. 127.
93. Campbell no. 139.
94. See especially Thompson 1989; Sahai 1984–85.
95. City Palace Museum, Jaipur, inv. no. C-12; Campbell no. 25.
96. Thompson 1989, p. 51. Another pavilion-like tent from Jodhpur was illustrated in New York, *India*, 1985, no. 165.
97. One fragment belongs to the City of Bristol Museum and Art Gallery, inv. no. Or. 1977.09.01; published in London, *Eastern Carpet*, 1983, no. 84, p. 103. The second fragment, unpublished, is in a private collection. A border fragment belonging to the Österreichisches Museum für Angewandte Kunst, Vienna, may also come from this carpet; published Sarre and Trenkwald 1926–29, vol. 1, pl. 38.
98. See Gans-Ruedin 1984, pp. 134–35, for a color illustration of the field fragment; see Martin 1908, p. 92, fig. 221, for a view with border attached.
99. Martin (1908, pp. 92, 97) says yes; K. Erdmann, in Hamburg 1950, no. 131, says no; the author has not examined the Düsseldorf fragments.
100. Smart 1987, nos. 11–18.
101. Campbell nos. 147, 148, 184.
102. A full view of the Victoria and Albert fragment was published in Walker 1982, p. 255, fig. 5. The Keir Collection piece is published in Spuhler 1978, no. 61. The fragment in the Los Angeles County Museum of Art (inv. no. M 70.37) is unpublished.
103. See note 128 for the Wher Collection rug.
104. Collection of the Museum of the Shrine, Mashhad, published Gans-Ruedin 1984, pp. 132–33; St. Louis Art Museum, inv. no. 73.29, published Dimand 1935, pl. 1x; and two fragments sold at Sotheby's, published New York 1991.
105. For a discussion of this carpet, further references, and an illustration of one large fragment, see Cincinnati 1985, no. 63, pp. 86–87.
106. Vienna 1892–93, vol. 5, part 9, pp. 1–4.
107. New Delhi 1997, no. 19, p. 57. See also London, *Indian Heritage*, 1982, no. 68.
108. I am grateful to Dr. Sussan Babaie for sharing her excellent photographs of the Chihil Sutun paintings. For a carpet of this type, see London, *Eastern Carpet*, 1983, no. 86.
109. Campbell nos. 1, 3, 6, 10.
110. Campbell nos. 5, 6.
111. Government Central Museum of Jaipur, inv. no. 2225, published in Dimand 1940, fig. 2.
112. Campbell nos. 9, 10.
113. The first pair is Campbell no. 1 and no. 2. The second pair, Campbell no. 3 and no. 4, is now in the City Palace Museum (inv. nos. C-10 and C-11).
114. Calico Museum inv. nos. 2747, 2748, 2749.
115. Calico Museum inv. no. 2747; Campbell no. 27.
116. Cohen, "Textiles," 1986, pp. 121, 127–28.
117. See, for example, the carpet in New York 1982, lot 192.
118. The second piece is in the collection of the Association pour l'Étude et la Documentation des Textiles d'Asie, Paris, inv. no. 3150; published in Okada et al. 1995, pl. 8.
119. The McGregor rug, published in London, *Fine Eastern Rugs*, 1983, lot 74.
120. London, *Islamic Works*, 1982, lot 78.
121. The Metropolitan Museum of Art, New York, inv. nos. 44.70 and 14.40.714, actually from the same carpet; published in Dimand and Mailey 1973, pp. 126–27, figs. 141, 142.
122. Inv. no. 1961.27, published in Hempel and Preysing 1970, no. 9.
123. Inv. no. R63.00.21, published in Walker 1982, p. 256, fig. 7.
124. The Metropolitan Museum of Art, New York, 67.267 has cotton warps and wefts but pashmina pile; see Appendix 1.
125. The rug illustrated in figure 125 and the one cited in note 127 all feature blue cotton wefts. Several rugs in Kyoto, datable to the eighteenth or early nineteenth century by virtue of local inventory records, also have blue cotton wefts; see Kajitani and Yoshida 1992, nos. 22 and 24–27. The latter are contemporaneous with the third group of millefleur rugs but represent the work of a different production center.
126. Robert Lehman Collection, The Metropolitan Museum of Art, New York, inv. nos. 1975.1.2455 and 1975.1.2463; unpublished.
127. Published in Washington, D.C., 1987, no. 77.
128. Wher Collection, published in Thompson 1983, p. 153, closely following an earlier nonpashmina example, figure 108; formerly in the Bernheimer Collection, published in London, *Bernheimer*, 1996, lot 181; The Metropolitan Museum of Art, New York, inv. no. 67.267, published in McMullan 1965, no. 33.
129. Cohen, "Ten Thousand," 1996, p. 75, fig. 2; see also figure 114 in the present text.
130. For an image of the complete painting, see London, *Indian Heritage*, 1982, no. 103.

131. See London 1995, lot 438.
132. As proposed in Cohen, "Ten Thousand," 1996, but without mention of the contemporary and closely related pattern-repeat type already discussed here.
133. A rug in the Budapest Museum of Applied Art may also be early, but it has not been examined by the author; Gombos 1985, no. 110, p. 94.
134. Inv. no. 1974-58; published in Washington, D.C., 1974, no. xxvii.
135. Harris 1908, pp. 7–8, 64.
136. Cohen, "Textiles," 1986.
137. Keir Collection, Richmond, England, published in Spuhler 1978, nos. 64, 65; Calico Museum, Ahmadabad, inv. no. 1388, unpublished.
138. Note, for example, the border "palmettes" of a carpet formerly in the Getty Collection, published in New York 1990, lot 5.
139. Published in *Hali* 70 (August–September 1993), p. 59 (advertisement).
140. Washington, D.C., 1974, no. xxiv.
141. Ellis 1988, no. 66, pp. 237–39.
142. Andrews 1905–6, second Hyderabad plate.
143. Cohen, "Textiles," 1986, pp. 126–27, figs. 17, 18.
144. Victoria and Albert Museum, London, inv. no. 1M 148-1924; information from Victoria and Albert Museum files, courtesy Rosemary Crill.
145. Victoria and Albert Museum, London, inv. no. 1M 50-1943, published in Cohen, "Textiles," 1986, p. 122, figs. 10, 11; inv. no. 1M 147-1924, unpublished. Provenance information from Victoria and Albert Museum files, courtesy Rosemary Crill.
146. Ellis 1988, pp. 238–39.
147. Kajitani and Yoshida 1992, incorporating one chapter in English by the author, pp. 173–88; Purdon 1994. I am very grateful to Nobuko Kajitani for introducing me to the Kyoto carpets in 1986.
148. Kajitani and Yoshida 1992, no. 17, p. 60.
149. Ibid., no. 23, pp. 62–63.
150. Ibid., no. 22, p. 62.
151. Campbell nos. 74, 91, 117, 126, 135, 138, 189, 190.
152. Kajitani and Yoshida 1992, nos. 31, 32, p. 68.
153. Ibid., no. 33, p. 69.
154. The Knole carpet is shown in the Ballroom, published in *Knole* 1993, p. 37. The painting is in The Metropolitan Museum of Art, New York, inv. no. 1982.213, published in Zebrowski 1983, p. 145, pl. xvii.
155. Kajitani and Yoshida 1992, no. 30, p. 67.
156. Two Indo-Persian carpets seen in 1986 on the float of the Hoka-boko Preservation Association had been replaced by 1990 with copies.
157. Kajitani and Yoshida 1992, nos. 11, 13, pp. 57–58.
158. Ibid., no. 14, pp. 58–59.
159. Ydema 1991, pp. 98–107.
160. Scheunemann 1959, p. 82ff.; Ydema 1991, p. 103ff.
161. See notes 155 and 156.
162. Toyama 1992, nos. 31–34, pp. 212–13.
163. These pieces, viewed in 1986, are unpublished.
164. The author is extremely grateful to Kojira Yoshida for providing this information.
165. July 8, 1918, lot 150; March 29, 1920, lot 169; and April 4, 1929, lot 273; all sales at the Kyoto Art Club.
166. Inv. no. OR 349; published Sarre and Trenkwald 1926–29, vol. 1, pl. 34.
167. Ydema 1991, pp. 92, 93, 104; figs. 97, 98, 107.
168. Kajitani and Yoshida 1992, no. 21, pp. 62–63, 187.
169. Wool wefts: Kajitani and Yoshida 1992, nos. 11, 13, pp. 58–59, 179, 182; cotton wefts: Kajitani and Yoshida 1992, no. 14, pp. 58–59, 181–82.
170. New York, *Thompson*, 1993, lot 79; *Hali* 78 (December 1994), p. 56 (advertisement).
171. See note 151.
172. *Tuzuk* 1974, vol. 1, p. 332.
173. London, *Islamic Works*, 1987, lot 94; others listed in Milan 1982, p. 49 (under pl. 35).
174. Orendi 1930, vol. 2, pl. 894.
175. Milan 1982, no. 35, pp. 62–63.
176. London, *Fine Eastern Textiles*, 1982, lot 119.
177. For one fragment, see New York 1994, lot 50.

Glossary

TECHNICAL

Note: The following technical notations and definitions are, with a few changes, those found in May Beattie, *Carpets of Central Persia*, Kent, 1976, pp. 29–30. Terms are given in the order found in the weaving process and are keyed especially to the technical information given for most items in the Checklist of the Exhibition.

z or s	The direction of the twist (spin) of a single strand of yarn, when viewed vertically, conforms either to the diagonal of the letter Z or to that of the letter S. The same symbols are used for the direction of two or more strands of yarn when twisted together (plied). In a plied yarn, the direction is usually opposite to that of the spin.
spin	see above
ply	see above
z2 or s2	Two strands of z-spun yarn or of s-spun yarn used together without plying.
z2s	z-spun yarn, two strands of which are s-plied, and by analogy z5s, s4z, etc.
U	Yarn, apparently unspun, or in which the direction is undetermined. This is not unusual in silk.
foundation	The basis, or groundwork, of a carpet formed of a plain weave of warps, to which knots are attached, and wefts that hold them in position. It determines the strength of a carpet.
warp	Yarns, frequently tightly spun and plied for strength, that extend from end to end of the carpet and around which the knots are tied. The cut ends usually form the fringes at the ends of a carpet. Warps may lie in one plane or two; in the latter case, alternate warps are described as depressed.
weft	Yarns which are passed from side to side of a carpet between rows of knots. They are usually loosely spun and unplied or only lightly plied.

lazy line

x 3 etc.

knots

jufī knots

knot count

pile

GENERAL

brocading

A diagonal line formed by a series of weft returns defining a discrete area of knotting, whereby the weaver, especially one working alone, will not have to shift to left or right so often to insert wefts and apply knots to the carpet's full width.

The number of plain-weave weft passes after each row of knots.

As used in carpet literature, the term "knot" denotes the interlacement around the warps of yarn, which forms the pile of the rug. Because the ends are not knotted about each other and drawn tight as in a true knot, the term is a misnomer. The asymmetrical (Persian, Senna) knot open to the left is the one commonly found in great Persian and Indian carpets of the classical period. When tied over four warps, instead of two, it is known as the *jufī* (paired) or false knot, the latter name derived from the fact that, in total, the rug requires less yarn, and in consequence the pile lacks density and wears poorly. See figs. 14 and 15.

see knots

The number of knots per linear inch (2.5 cm) transversely, multiplied by the number per linear inch longitudinally, gives the count per square inch. Where the metric system is in use the linear count is based on the decimeter (10 cm or 4 in.).

The soft velvety surface of a carpet formed by the projecting knot yarn.

Specifically, discontinuous supplementary wefts introduced in specific areas to produce a special effect or pattern. Unlike embroidery, brocading is incorporated during the weaving process while the textile or carpet is still on the loom.



	Idiomatically, the term is used to refer to all types of elaborate, fancy textiles.	millefleur	A pattern consisting of many clusters of small blossoms sometimes arranged in pattern repeats. The pattern is characteristic of one group of Indian carpets woven primarily during the eighteenth century.
dhurrie	An Indian tapestry-woven carpet made of cotton.	pashmina	Fine wool, made from the undercoat of Himalayan mountain goats; used for luxury production of shawls and carpets.
drawloom	A loom for weaving figured textiles, equipped with pattern heddles that make possible the regular repetition of the pattern.	pietra dura	Inlay of hard or semiprecious stones.
darbar	An audience hall or court of a ruler; a formal royal audience. The term is applied to particularly large Indian carpets (see p. 118ff.).	Polonaise carpets	Sumptuous silk (and cotton) carpets, sometimes with silver and gold brocading, made in Iran from the end of the sixteenth to the second half of the seventeenth century. The name is a misnomer based on the incorrect identification of these carpets in the nineteenth century as Polish.
farrāshkhāna	Literally “carpet house”: the storehouse for carpets, tents, and furnishing (non-costume) textiles.	qanāt	A wall or screen of canvas or cloth, used to form an enclosure around a tent.
flat weave	A kilim or similar carpet or fabric without pile.	Sanguszko carpets	A small group of Persian carpets of the late sixteenth and early seventeenth century distinguished by figural decoration and a bright appearance owing to brilliant colors and, in some instances, a white ground. The type is named after a previous owner of the best-known example.
guard stripe	A narrow band flanking the main border of a carpet.	saph	Multiple-niche prayer carpet.
Herāt carpets	A type of Persian carpet made in the second half of the sixteenth and early seventeenth century and named for the Persian city of Herāt. The field pattern most often consists of scrolling vines with palmettes and leaves, sometimes with animals or birds superimposed. Most examples have a red field and dark green border, and the finest pieces have silk foundations.	Shi‘ite	Pertaining to the heterodox Islamic sect, Shi‘ism, whose followers recognize ‘Alī, cousin and son-in-law of the Prophet, and his descendants as the rightful successors to Muḥammad. Shi‘ism is followed primarily in Iran.
Indo-Persian carpets	The commercially produced successor to the Herāt type, made throughout the seventeenth century in Iran. Normally woven with wool pile on cotton foundations, Indo-Persian carpets often have simplified versions of Herāt designs. The name results from confusion about their origins.	spandrel	In architecture, the space above the sloping sides of an arch. In carpets, the triangular space above the sloping sides of a niche, as in a prayer rug.
kārkhāna	Workshop	Sunni	Pertaining to the orthodox Islamic tradition, whose followers believe that the Prophet’s successors should be elected.
Kāshān carpets	A group of fine silk pile carpets of the sixteenth century, generally attributed to the Persian city of Kāshān. Several large pieces with medallions and figural designs range in date from about 1540 to late in the century. More numerous pieces in a small format, dating from the second half of the century, feature figural patterns or medallion and floral designs.	ton-sur-ton	The coloristic effect created by juxtaposing shades of the same color or similar colors, as in pink and red, ocher and beige, etc.
kilim	A tapestry-woven carpet, usually made of wool.	vase carpets	A confusing term applied to a group of Persian carpets, mostly from the seventeenth century, often with floral lattice patterns and sometimes incorporating conspicuous vases. True members of the group have a distinctive construction featuring three weft shoots of wool and silk or cotton. The type is generally attributed to Kermān.
kitābkhāna	Library, or center for the production and collection of books.		

Bibliography

Abū'l Faẓl 1869

[Abu al-Fazl ibn Mubarak.] *A'īn-i Akbarī*. Lucknow, 1869. [In Persian]

Abū'l Faẓl 1977

[Abu al-Fazl ibn Mubarak.] *The A'īn-i Akbarī by Abū'l-Faẓl 'Allāmi*. Trans. Henry Blochmann and H. S. Jarrett, and ed. D. C. Phillott. 3 vols. Royal Asiatic Society of Bengal. 3d ed. Calcutta, 1977.

Andrews 1905–6

Fred H. Andrews. "Indian Carpets and Rugs." *Journal of Indian Art* 12 (1905–6), pp. 1–10.

Arnold 1936

Sir Thomas W. Arnold. *The Library of A. Chester Beatty: A Catalogue of the Indian Miniatures*. Rev. and ed. J. V. S. Wilkinson. 3 vols. London, 1936.

Barbosa 1918

Duarte Barbosa. *The Book of Duarte Barbosa: An Account of the Countries Bordering on the Indian Ocean and Their Inhabitants . . . Completed about the Year 1518 A.D.* Ed. M. Longworth Dames. 2 vols. Hakluyt Society Publications, 2d ser., vols. 44, 49. London, 1918–21.

Beattie 1961

May H. Beattie. "The Burrell Collection of Oriental Rugs." *Oriental Art*, n.s., 8 (1961), pp. 162–69.

Beattie, "List of Oriental Carpets," 1972

May H. Beattie. "Classified List of Oriental Carpets in the Maharaja Sawai Man Singh II Museum, The City Palace, Jaipur." [This unpublished report was given to the author by May H. Beattie]

Beattie, *Thyssen-Bornemisza*, 1972

May H. Beattie. *The Thyssen-Bornemisza Collection of Oriental Rugs*. Castagnola, Switz., 1972.

Beattie, "Paravicini," 1982

May H. Beattie. "The Paravicini Prayer Rug." In "The Art of the Mughal Carpet." *Hali* 4, no. 3 (1982), pp. 220–21, 236–37.

Beattie, "Widener," 1982

May H. Beattie. "Widener Animal Carpet." In "The Art of the Mughal Carpet." *Hali* 4, no. 3 (1982), pp. 228–29, 237–38.

Begam 1989

Gul-Badan Begam. *The History of Humāyūn . . . from the Only Known MS. of the British Museum*. Trans. and ed. Annette S. Beveridge. Reprint, Lahore, 1989.

Begley and Desai 1990

The Shah Jahan Nama of 'Inayat Khan: An Abridged History of the Mughal Emperor, as Compiled by His Royal Historian. Trans. A. R. Fuller and ed. Wayne E. Begley and Ziya-ud-Din [Ziauddin] A. Desai. Delhi, New York, Oxford, 1990.

Bennett 1985

Ian Bennett, ed. *Rugs and Carpets of the World*. London, 1977. Reprint, 1985.

Bennett 1986

Ian Bennett. "The Emperor's Old Carpets." *Hali* 31 (July–September 1986), pp. 10–19.

Bennett and Franes, "Boughton," 1992

Ian Bennett and Michael Franes. "The Early European and Oriental Carpets at Boughton." In *Boughton House: The English Versailles*, ed. Tessa Murdoch, pp. 108–17. London, 1992.

Bennett and Franes, "Buckleuch," 1992

Ian Bennett and Michael Franes. "The Buckleuch European Carpets and Others in the Oriental Style." *Hali* 66 (December 1992), pp. 94–107.

Bernier 1916

François Bernier. *Travels in the Mogul Empire, a.d. 1656–1668*. Trans. and annotated A. Constable [1891]. 2d ed. rev. V. A. Smith. London, 1916.

Blair and Bloom 1994

Sheila S. Blair and Jonathan M. Bloom. *The Art and Architecture of Islam 1250–1800*. New Haven, 1994.

**Bode and Kühnel 1922**

Wilhelm von Bode and Ernst Kühnel. *Vorderasiatische Knüpsteppiche aus älterer Zeit*. Monographie des Kunstgewerbes, 1. Leipzig, 1922.

Bode and Kühnel 1958

Wilhelm von Bode and Ernst Kühnel. *Antique Rugs from the Near East*. Trans. Charles G. Ellis. Brunswick and Berlin, 1958. [Translation of 1955 German 4th edition]

Bode and Kühnel 1984

Wilhelm von Bode and Ernst Kühnel. *Antique Rugs from the Near East*. Trans. Charles G. Ellis. Rev. 4th ed. of Bode and Kühnel 1958. London and Ithaca, N.Y., 1984.

Brand and Lowry 1985

Michael Brand and Glenn D. Lowry, with contributions by Ziauddin A. Desai and Attilio Petruccioli. *Fatehpur-Sikri: A Sourcebook*. Aga Khan Program for Islamic Architecture. Cambridge, Mass., 1985.

Briggs 1940

Amy Briggs. "Timurid Carpets I: Geometric Carpets." *Ars Islamica* 7 (1940), pp. 20–54.

Brisch 1975

Klaus Brisch. "Indischer Spiralranken-Teppich: Neuerwerbung des Museums für islamische Kunst." *Berliner Museen: Berichte aus den preussischen Kunstsammlungen* 3 (1975), pp. 5–7.

Brown 1924

Percy Brown. *Indian Painting under the Mughals, A.D. 1550–A.D. 1750*. Oxford, 1924.

Campbell 1929

A. J. D. Campbell. "Report to the President and Members of the Jaipur Council." London, 1929. [On deposit in the archives of the Victoria and Albert Museum]

Chicago 1947

Art Institute of Chicago. *An Exhibition of Antique Oriental Rugs: February 6–March 16, 1947*. Chicago, 1947.

Cincinnati 1985

Ellen S. Smart and Daniel S. Walker. *Pride of the Princes: Indian Art of the Mughal Era in the Cincinnati Art Museum*. Exh. cat. Cincinnati, 1985.

Codrington 1931

K. de B. Codrington. "Mughal Marquetry." *Burlington Magazine* 58 (1931), pp. 78–85.

Cohen, "Development," 1986

Steven J. Cohen. "The Development of Indian Floor Coverings and Their Appearance in Miniature Paintings." Ph.D. diss., University of London, School of Oriental and African Studies, 1986.

Cohen, "Textiles," 1986

Steven J. Cohen. "Textiles." *Islamic Heritage of the Deccan*, ed. George Michell, pp. 118–28. Bombay, 1986.

Cohen 1987

Steven J. Cohen. "Indian and Kashmir Carpets Before Akbar: Their Perceived 'History.'" In *Oriental Carpet and Textile Studies*, ed. Robert Pinner and Walter B. Denny, vol. 3, pp. 119–26. London, 1987.

Cohen, "Fearful Symmetry," 1996

Steven J. Cohen. "A Fearful Symmetry: The Mughal Red-Ground 'Grotesque' Carpets." In *Silk and Stone: The Third Hali Annual*, ed. Jill Tilden, pp. 104–35. London, 1996.

Cohen, "Ten Thousand," 1996

Steven J. Cohen. "Ten Thousand at a Glance." *Hali* 88 (September 1996), pp. 74–77.

Coomaraswamy 1930

Ananda K. Coomaraswamy. *Mughal Painting*. Part 6 of *Catalogue of the Indian Collections in the Museum of Fine Arts, Boston*. Cambridge, Mass., 1930.

Corcoran 1932

Illustrated Handbook of the W. A. Clark Collection. Preface to Paintings by Royal Cortissoz, Foreword by Charles C. Glover. The Corcoran Gallery of Art. Washington, D.C., 1932.

Correia-Afonso 1980

John Correia-Afonso, ed. *Letters from the Mughal Court: The First Jesuit Mission to Akbar, 1589–1583*. Studies in Indian History and Culture of the Heras Institute, 24. St. Louis, 1980.

Dartmouth 1991

Sheila S. Blair and Jonathan M. Bloom, eds. *Images of Paradise in Islamic Art*. Exh. cat., Hood Museum of Art, Hanover, N.H., Asia Society Galleries, New York, and elsewhere. Hanover, N.H., 1991. [For a traveling exhibition held in 1991 and 1992]

Dartmouth 1991–92. See Dartmouth 1991**Datta 1970**

C. L. Datta. "Significance of Shawl Wool in Western Himalayan Politics." *Bengal Past and Present* 89 (January–June 1970), pp. 16–28.

Denny 1978

Walter B. Denny. "Ten Great Carpets." *Hali* 1, no. 2 (Summer 1978), pp. 156–64.

Dimand 1935

Maurice S. Dimand. *The Ballard Collection of Oriental Rugs in the City Art Museum of St. Louis*. St. Louis, 1935.

Dimand 1940

Maurice S. Dimand. "A Persian Carpet in the Jaipur Museum." *Ars Islamica* 7 (1940), pp. 93–96.

Dimand 1977

Maurice S. Dimand. "Oriental Rugs." In *Enamels, Rugs and Silver*, pp. 247–82. Vol. 8 of *The Frick Collection: An Illustrated Catalogue*. New York, 1977.

Dimand and Mailey 1973

Maurice S. Dimand and Jean Mailey. *Oriental Rugs in The Metropolitan Museum of Art*. New York, 1973.

Eiland 1979

Murray L. Eiland. *Chinese and Exotic Rugs*. Boston, 1979.

Elliot and Dowson 1976

Sir Henry Miers Elliot. *The History of India as Told by Its Own Historians, The Muhammadan Period: The Posthumous Papers of the Late Sir H. M. Elliot*. Ed. John Dowson. 8 vols. London, 1867–77. Reprint, Lahore, 1976.

Ellis, "Compartment," 1965

Charles Grant Ellis. "Some Compartment Designs for Carpets, and Herat." *Textile Museum Journal* 1, no. 4 (December 1965), pp. 42–56.

Ellis, "Indian Carpets," 1965

Charles Grant Ellis. "Indian Carpets in U.S.A. Museums." *Marg* 18, no. 4 (September 1965), pp. 12–14.

Ellis 1982

Charles Grant Ellis. "The Altman Lattice Carpet." In "The Art of the Mughal Carpet." *Hali* 4, no. 3 (1982), pp. 230–31, 238.

Ellis 1988

Charles Grant Ellis. *Oriental Carpets in the Philadelphia Museum of Art*. Philadelphia, 1988.

English Factories in India, 1618–1621

Sir William Foster, ed. *The English Factories in India, 1618–1621: A Calendar of Documents in the India Office, British Museum and Public Record Office*. Oxford, 1906. [This collection is a continuation of *Letters Received*, ed. William Foster, listed below]

English Factories in India, 1622–1623

Sir William Foster, ed. *The English Factories in India, 1622–1623: A Calendar of Documents in the India Office and British Museum*. Oxford, 1908.

English Factories in India, 1624–1629

Sir William Foster, ed. *The English Factories in India, 1624–1629: A Calendar of Documents in the India Office, British Museum and Public Record Office*. Oxford, 1909.

English Factories in India, 1630–1633

Sir William Foster, ed. *The English Factories in India,*

1630–1633: A Calendar of Documents in the India Office, British Museum and Public Record Office. Oxford, 1910.

English Factories in India, 1634–1636

Sir William Foster, ed. *The English Factories in India, 1634–1636: A Calendar of Documents in the India Office, British Museum and Public Record Office*. Oxford, 1910.

English Factories in India, 1642–1645

Sir William Foster, ed. *The English Factories in India, 1642–1645: A Calendar of Documents in the India Office, Westminster*. Oxford, 1913.

H. Erdmann 1966

Hanna Erdmann. *Orientteppiche, 16.–19. Jahrhundert*. Bildkataloge, 9. Kestner Museum. Hannover, 1966.

H. Erdmann 1982

Hanna Erdmann. "Mughal Carpet with Grotesques." In "The Art of the Mughal Carpet." *Hali* 4, no. 3 (1982), pp. 224–25, 236–37.

K. Erdmann 1960

Kurt Erdmann. "Der indische Knüpftteppich." In *Indologische Arbeitstagung: Verhandlungen (Essen-Bredeney)*, ed. Ernst Waldschmidt, pp. 104–14. Göttingen, 1960.

K. Erdmann 1970

Kurt Erdmann. *Seven Hundred Years of Oriental Carpets*. Ed. Hanna Erdmann, and trans. May H. Beattie and Hildegard Herzog. Berkeley, Cal., 1970.

K. Erdmann 1976

Kurt Erdmann. *Oriental Carpets: An Essay on Their History*. Trans. Charles G. Ellis. New York, 1960. Reprint, New York, 1976.

Folsach 1990

Kjeld von Folsach. *Islamic Art: The David Collection*. Copenhagen, 1990.

Foster 1921

Sir William Foster, ed. *Early Travels in India, 1583–1619*. Oxford, 1921.

Franses and Pinner 1982

Michael Franses and Robert Pinner. "Mughal Floral Lattice Carpet." In "The Art of the Mughal Carpet." *Hali* 4, no. 3 (1982), pp. 232–33, 238.

Gans-Ruedin 1984

Erwin Gans-Ruedin. *Indian Carpets*. Trans. Valerie Howard. New York, 1984.

Gascoigne 1971

Bamber Gascoigne. *The Great Moghuls*. Photographs by Christina Gascoigne. New York, 1971.

Godard 1937

Yedda A. Godard. "Un Album de portraits des princes timurides de l'Inde." *Athar-e Iran* 2 (1937), pp. 179–277.

Gombos 1985

Károly Gombos. *Aszkéták, dervisek, imaszönyegek* (Ascetics, dervishes, prayer rugs). Budapest, [1985].

Grabar and Blair 1980

Oleg Grabar and Sheila S. Blair, eds. *Epic Images and Contemporary History: The Illustrations of the Great Mongol Shahnama*. Chicago, 1980.

Hamburg 1950

Kurt Erdmann, ed. *Orientalische Teppiche aus vier Jahrhunderten*. Exh. cat., Museum für Kunst und Gewerbe. Hamburg, 1950.

Hamzanāma 1974

Hamza-Nāma: Vollständige Wiedergabe der bekannten Blätter der Handschrift aus den Beständen aller erreichbaren Sammlungen. 2 vols. Codices Selecti Phototypice Impressi, 52. Graz, 1974.

Harris 1908

Henry T. Harris. *Monograph on the Carpet Weaving Industry of Southern India*. Madras, 1908. Reprinted in the *Monograph Series on Madras Presidency/Southern India* (New Delhi, 1982).

Hempel and Preysing 1970

Rose Hempel and Maritheres Gräfin Preysing, eds. *Alte Orient-Teppiche*. Grosse Bilderhefte, 2. Museum für Kunst und Gewerbe. Hamburg, 1970.

Hendley 1905

T. H. Hendley. *Asian Carpets: XVI. and XVII. Century Designs from the Jaipur Palaces . . . from Material Supplied with the Permission of H. H. the Maharaja of Jaipur and from Other Sources*. London, 1905.

Ibn-Battūṭa 1929

Ibn Battuta. *Travels in Asia and Africa, 1325–1354*. Trans. and selected H. A. R. Gibb. The Broadway Travellers. London, 1929.

Irwin 1956

John Irwin. "Early Indian Carpets." *Antiques* 69 (February 1956), pp. 154–57.

Irwin 1962

John Irwin. *Girdlers' Carpet*. London, 1962.

Irwin, "Fremlin," 1965

John Irwin. "Fremlin Carpets." *Marg* 18, no. 4 (September 1965), pp. 18–19.

Irwin, "Girdlers," 1965

John Irwin. "Girdlers Carpet." *Marg* 18, no. 4 (September 1965), pp. 15–17.

Irwin 1966

John Irwin. "Indian Textile Trade in the Seventeenth Century." In *Studies in Indo-European Textile History*, ed. John Irwin and P. R. Schwartz, pp. 8–74. Ahmadabad, 1966. [A collection of essays first published in the *Journal*

of Indian Textile History (Calico Museum of Textiles), Ahmadabad, India, 1955–59]

Irwin 1973

John Irwin. *The Kashmir Shawl*. London, 1973.

Irwin 1976

John Irwin. "Fremlin Carpet." *Marg* 29, no. 4. (September 1976), pp. 65–66.

Islam 1982

Riazul Islam. *A Calendar of Documents on Indo-Persian Relations, 1500–1750*. Vol. 2 (1982). Tehran, 1979–82.

Islamic World 1987

The Islamic World: The Metropolitan Museum of Art. Intro. Stuart Cary Welch. Metropolitan Museum of Art, 2. New York, 1987.

Jenkins 1983

Marilyn Jenkins, ed. *Islamic Art in the Kuwait National Museum: The al-Sabah Collection*. London, 1983.

Kajitani and Yoshida 1992

Nobuko Kajitani and Kojiro Yoshida. *Gion matsuri yama-boko kensohin chosa hokokusho: Torai senshoku no bu* (A survey of the Gion Festival float hangings: Imported textiles, rugs, tapestries, and costumes). Kyoto, 1992.

Kendrick and Tattersall 1922

Albert F. Kendrick and Creassey Edward C. Tattersall. *Hand-woven Carpets, Oriental and European*. 2 vols. London, 1922.

Knole 1993

Knole: Kent. The National Trust. London, 1993.

Leeds 1964

May H. Beattie, ed. *The Rug in Islamic Art*. Exh. cat., Temple Newsam House. Leeds, 1964.

Letters Received

Letters Received by the East India Company from its Servants in the East: Transcribed from the "Original Correspondence" Series of the India Office records. Ed. William Foster, intro. Frederick Charles Danvers. Vol. 1 (1602–13); vol. 2 (1613–15); vol. 3 (1615); vol. 4 (1616); vol. 5 (1617: January to June); vol. 6 (1617: July to December). London, 1896–1902. [This collection is continued in the series *English Factories in India*, cited above]

Lisbon, Reservas, 1985

Museu Calouste Gulbenkian, Coleção Calouste Gulbenkian. *Um Olhar Sobre as Reservas: Tapetes Orientais*. Lisbon, 1985.

Lisbon, Tapetes, 1985

Museu Calouste Gulbenkian, Coleção Calouste Gulbenkian. *Tapetes Orientais*. Lisbon, 1985.

London 1947–48. See London 1950

London 1950

Sir Leigh Ashton, ed. *The Art of India and Pakistan: A Commemorative Catalogue of the Exhibition Held at The Royal Academy of Arts, London, 1947–8*. Essays by K. de B. Codrington ("Sculpture"); John Irwin ("Bronzes and Textiles"); and Basil Gray ("Painting"). London, 1950.

London 1969

Catalogue of Highly Important Rugs and Carpets: Sold by order of the Kevorkian Foundation. Part 1. Sale cat., Sotheby's, December 5, 1969. London.

London 1970

Catalogue of Highly Important Rugs and Carpets: Sold by Order of the Kevorkian Foundation. Part 2. Sale cat., Sotheby's, December 11, 1970. London.

London 1976

The Arts of Islam. Exh. cat., Hayward Gallery. London, 1976.

London, Fine Eastern Textiles, 1982

Fine Eastern Textiles, Rugs and Carpets. Sale cat., Christie's, April 22, 1982. London.

London, Indian Heritage, 1982

The Indian Heritage: Court Life and Arts under Mughal Rule. Exh. cat., Victoria and Albert Museum. London, 1982.

London, Islamic Works, 1982

Islamic Works of Art, Carpets and Textiles. Sale cat., Sotheby's, October 12–13, 1982. London.

London, Eastern Carpet, 1983

Donald King and David Sylvester, eds. *The Eastern Carpet in the Western World from the Fifteenth to Seventeenth Century*. Exh. cat., Arts Council of Great Britain and the Hayward Gallery. London, 1983.

London, Fine Eastern Rugs, 1983

Fine Eastern Rugs and Carpets. Sale cat., Christie's, June 13, 1983. London.

London 1984

Islamic Works of Art, Carpets and Textiles. Sale cat., Sotheby's, April 18, 1984. London.

London, Islamic Works, 1987

Islamic Works of Art, Carpets and Textiles. Sale cat., Sotheby's, April 16, 1987. London.

London, Jail Birds, 1987

Ian Bennett. *Jail Birds: An Exhibition of Nineteenth Century Indian Carpets Held at the Mall Galleries*. Exh. cat., The Mall, March 24–28. London, 1987.

London 1990

John Guy and Deborah Swallow, eds. *Arts of India: 1550–1900*. Exh. cat., Victoria and Albert Museum. London, 1990.

London 1995

Islamic Art, Indian Miniatures, Rugs and Carpets. Sale cat., Christie's, October 17 and 19, 1995. London.

London, Bernheimer, 1996

The Bernheimer Family Collection of Carpets. Sale cat., Christie's, February 14, 1996. London.

London, Islamic Art, 1996

Islamic Art and Indian Miniatures. Sale cat., Christie's, April 23 and 25, 1996. London.

Los Angeles, Taj Mahal, 1989

Pratapaditya Pal, Janice Leoshko, Joseph M. Dye III, and Stephen Markel, eds. *Romance of the Taj Mahal*. Exh. cat., Los Angeles County Museum of Art and Asia Society, New York. Los Angeles, 1989. [For an exhibition held 1989 to 1991]

Los Angeles, Taj Mahal, 1989–91. See Los Angeles, *Taj Mahal*, 1989

Los Angeles, Timur, 1989

Thomas W. Lentz and Glenn D. Lowry, eds. *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century*. Exh. cat., Arthur M. Sackler Gallery, Washington, D.C., and Los Angeles County Museum of Art. Los Angeles, 1989.

Manucci 1907

Niccolò Manucci. *Storia del Mogor; or, Mogul India, 1653–1708*. Ed. and trans. William Irvine. 4 vols. London, 1907–8.

Martin 1908

Fredrik R. Martin. *A History of Oriental Carpets before 1800*. Vienna, 1908.

McMullan 1965

Joseph V. McMullan. *Islamic Carpets*. New York, 1965.

Milan 1982

Il Tappeto orientale dal XV al XVIII secolo. Exh. cat., Eskenazi Gallery. Milan, 1982.

Mi'rajnāma 1977

Marie-Rose Séguy, ed. *The Miraculous Journey of Mahomet: Mirāj Nāmeḥ*, Bibliothèque nationale, Paris (manuscrit supplément Turn 190). Trans. Richard Pevear. New York, 1977.

Monseratte 1922

Antonio Monseratte. *The Commentary of Father Monseratte, S. J., on His Journey to the Court of Akbar*. Trans. J. S. Hoyland and annotated S. N. Banerjee. London, 1922.

Mumford 1910

John K. Mumford. *The Yerkes Collection of Oriental Carpets: A Limited Deluxe Portfolio Containing Twenty-seven Facsimile Reproductions in Color*. New York, 1910.

Mundy 1907–36

The Travels of Peter Mundy in Europe and Asia, 1608–1667. Ed. Lt.-Col. Sir Richard Carnac Temple, bart. 5 vols. in 6. Hakluyt Society Publications, 2d ser., vols. 17, 35, 45–46, 55, 78. Cambridge, 1907–36.

Munich 1910. See Munich 1912

Munich 1912

Friedrich Sarre and Fredrik R. Martin, eds. *Die Ausstellung von Meisterwerken muhammedanischer Kunst in München 1910.* Exh. cat. 3 vols. Munich, 1912. [For an exhibition held in 1910]

Nath 1976

Ram Nath. *Some Aspects of Mughal Architecture.* New Delhi, 1976.

New Delhi 1997

Milo Cleveland Beach and Ebba Koch, eds. *King of the World: The Padshahnama: An Imperial Mughal Manuscript from the Royal Library, Windsor Castle.* Trans. Wheeler Thackston. Exh. cat. London 1997. [For a traveling exhibition, organized by the Arthur M. Sackler Gallery, Washington, D.C., and the Royal Library, Windsor Castle, that began in New Delhi, 1997]

New York 1903

Illustrated Catalogue of the Art and Literary Property Collected by the Late Henry G. Marquand. Sale cat., American Art Association, January 23, 1903. New York.

New York 1910

Wilhelm Valentiner. *Catalogue of a Loan Exhibition of Early Oriental Rugs.* Exh. cat., Metropolitan Museum of Art. New York, 1910. [For an exhibition held in 1910 and 1911]

New York 1926

Rare Old Rugs/XV–XVIII Century Rugs: The Private Collection of the Messrs. Vitall and Leopold Benguiat, Paris & New York. . . . part 2. Sale cat., American Art Association, December 4, 1926. New York.

New York 1932

Rare Ancient Rugs: The V. and L. Benguiat Collection, Sold to Liquidate Their Indebtedness to the American Art Association. Sale cat., Anderson Galleries Inc., April 23, 1932. New York.

New York 1934

Three Distinguished Gilbert Stuarts and Other Paintings, A Portrait Bust by Houdon, XVI–XVII Century Ispahan and Other Important Rugs, Queen Anne and Georgian Silver, Queen Anne and Georgian Furniture, Chinese Porcelains and Other Objects of Art: From the Estate of the Late Elbert H. Gary. Sale cat., American Art Association, December 7 and 8, 1934. New York.

New York 1963

Stuart Cary Welch, ed. *The Art of Mughal India: Painting and*

Precious Objects. Exh. cat., Asia House Gallery. New York, [1963]. [For an exhibition held in the winter of 1964]

New York 1964. See New York 1963

New York 1966

The Kevorkian Collection of Rare and Magnificent Oriental Carpets. Exh. cat., Metropolitan Museum of Art. New York, 1966.

New York 1981

Fine Oriental Rugs and Carpets. Sale cat., Sotheby Parke-Bernet, April 10–11, 1981. New York.

New York 1982

Fine Oriental Rugs and Carpets. Sale cat., Sotheby's, October 30, 1982. New York.

New York, Akbar's India, 1985

Michael Brand and Glenn D. Lowry, eds. *Akbar's India: Art from the Mughal City of Victory.* Exh. cat., Asia Society Galleries, New York, Harvard University Art Museums, Cambridge, Mass., and Museum of Fine Arts, Houston. New York, 1985. [For an exhibition held in 1985 and 1986]

New York, Akbar's India, 1985–86. See New York, *Akbar's India*, 1985

New York, India, 1985

Stuart Cary Welch, ed. *India: Art and Culture, 1300–1900.* Exh. cat., Metropolitan Museum of Art. New York, 1985.

New York, India, 1985–86. See New York, *India*, 1985

New York 1990

Carpets from the J. Paul Getty Museum. Sale cat., Sotheby's, December 8, 1990. New York.

New York 1991

Fine Oriental and European Carpets. Sale cat., Sotheby's, December 11, 1991. New York.

New York, Oriental and European Carpets, 1993

Fine Oriental and European Carpets. Sale cat., Sotheby's, April 16, 1993. New York.

New York, Thompson, 1993

Turkmen and Antique Carpets from the Collection of Dr. and Mrs. Jon Thompson. Sale cat., Sotheby's, December 16, 1993. New York.

New York 1994

Fine Oriental and European Carpets. Sale cat., Christie's, April 20, 1994. New York.

Okada et al. 1995

Amina Okada, Marie-Hélène Guelton, with preface by Krishna Riboud. *Le Motif floral dans les tissus moghols: Inde XVIIe et XVIIIe siècles.* Association pour l'Étude et la Documentation des Textiles d'Asie. Paris, 1995.

Orendi 1930

Julius Orendi. *Das Gesamtwissen über antike und neue Teppiche des Orients*. 2 vols. Vienna, 1930.

Osaka 1994

Sugimura Toh, ed. *Jutan: Shiruku Rodo no hana/Woven Flowers of the Silk Road: An Introduction to the Carpet Heritage of West Asia and Central Asia*. Exh. cat., National Museum of Ethnology, Osaka. Tokyo, 1994. [In Japanese and English]

Paris 1903

Gaston Migeon. *Exposition des arts musulmans au Musée des Arts décoratifs*. Exh. cat. Paris, 1903.

Paris 1921

Catalogue des Tableaux anciens, tableaux modernes, objets d'art et de haute curiosité, importantes tapisseries composant la Collection Engel-Gros. Sale cat., American Art Association, Galeries Georges Petit, May 30 and 31, and June 1, 1921. Paris.

Paris 1931

La Collection Gustave Homberg. Sale cat., Galeries Georges Petit, June 3–5, 1931. Paris.

Paris 1989

Marthe Bernus-Taylor et al. *Arabesques et jardins de paradis: Collections françaises d'art islamique*. Exh. cat., Musée du Louvre. Paris, 1989. [For an exhibition held in 1989 and 1990]

Paris 1989–90. See Paris 1989

Pelsaert 1925

Francisco Pelsaert. *Jahangir's India: The Remonstrantie of Francisco Pelsaert*. Trans. William H. Moreland and Pieter Geyl. Cambridge, 1925.

Platts 1983

John T. Platts. *A Dictionary of Urdu, Classical Hindi, and English*. Lahore, 1983.

Pope 1938–39

Arthur Upham Pope, ed. *A Survey of Persian Art from Prehistoric Times to the Present*. With Phyllis Ackerman. 6 vols. Oxford, 1938–39.

Purdon 1994

Nicholas Purdon. "Gion Matsuri." *Hali* 77 (October–November 1994), pp. 88–95.

Pyrard 1887–90

François Pyrard. *The Voyage of François Pyrard of Laval to the East Indies, the Maldives, the Moluccas and Brazil*. Trans. Albert Gray and H. C. P. Bell. 2 vols. in 3. Hakluyt Society Publications, vols. 76–77, 80. London, 1887–90.

Rich 1987

Vivian A. Rich. "Mughal Floral Painting and Its European Sources." *Oriental Art*, n.s., 33, no. 2 (Summer 1987), pp. 183–89.

Roe 1926

Sir Thomas Roe. *The Embassy of Sir Thomas Roe to India, 1615–1619*. Ed. Sir William Foster. Oxford, 1926.

Rogers 1983

J. Michael Rogers. *Islamic Art and Design: 1500–1700*. London, 1983.

Sahai 1984–85

Yaduendra Sahai. "The Shaped Carpets of Amber." *The Researcher: A Bulletin of Rajasthan's Archaeology and Museums* 14–15 (1984–1985), pp. 101–4.

Sarre and Trenkwald 1926–29

Friedrich Sarre and Hermann Trenkwald. *Old Oriental Carpets*. Trans. A. F. Kendrick. 2 vols. Vienna–Leipzig, 1926–29.

Scheunemann 1959

Brigitte Scheunemann. "An Unknown Carpet Type." *Kunst des Orients* 3 (1959), pp. 78–89.

Serjeant 1972

R. B. Serjeant. *Islamic Textiles: Material for a History up to the Mongol Conquest*. Beirut, 1972.

Sindermann 1995

F. Sindermann. "A Group of Indian Carpet Fragments with Animal Grotesque Design on a Red Ground." *Oriental Rug Review* 15, no. 5 (1995), pp. 21–27.

Singh 1979

Chandramani Singh. *Textiles and Costumes from the Maharaja Sawai Man Singh II Museum*. Jaipur, 1979.

Singh and Ahivasi 1981

Chandramani Singh and Devaki Ahivasi. *Woollen Textiles and Costumes from Bharat Kala Bhavan*. Varanasi, 1981.

Skelton 1972

Robert Skelton. "A Decorative Motif in Mughal Art." In *Aspects of Indian Art: Papers Presented in a Symposium at the Los Angeles County Museum of Art, October 1970*, ed. Pratapaditya Pa, pp. 147–52. Leiden, 1972.

Smart 1981

Ellen S. Smart. "Akbar, Illiterate Genius." In *Kaladarsana: American Studies in the Art of India*, ed. Joanna G. Williams, pp. 99–107. New Delhi and Oxford, 1981.

Smart 1987

Ellen S. Smart. "A Preliminary Report on a Group of Important Mughal Textiles." *Textile Museum Journal* 25 (1987), pp. 5–23.

Spuhler 1978

Friedrich Spuhler. *Islamic Carpets and Textiles in the Keir Collection*. Trans. George and Cornelia Wingfield Digby. London, 1978.



- Spuhler 1987**
Friedrich Spuhler. *Die Orientteppiche im Museum für islamische Kunst Berlin*. Munich, 1987.
- Stutley 1985**
Margaret Stutley. *The Illustrated Dictionary of Hindu Iconography*. London, 1985.
- Tavernier 1889**
Jean-Baptiste Tavernier. *Travels in India*. Trans. Valentine Ball. 2 vols. London and New York, 1889.
- Thompson 1983**
Jon Thompson. *Oriental Carpets from the Tents, Cottages and Workshops of Asia*. New York, 1983.
- Thompson 1989**
Jon Thompson. "Shaped Carpets Found in the Jaipur Treasury." In *In Quest of Themes and Skills: Asian Textiles*, ed. Krishna Riboud, pp. 48–51. Bombay 1989.
- Thompson 1993**
Jon Thompson. "An Artist's Anthology." *Hali* 71 (October–November 1993), pp. 106–8.
- Thornton 1978**
Peter Thornton. *Seventeenth-Century Interior Decoration in England, France and Holland*. Studies in British Art. New Haven, 1978.
- Thornton and Tomlin 1980**
Peter Thornton and Maurice Tomlin. *The Furnishing and Decoration of Ham House*. Furniture History, 16. London, 1980.
- Toyama 1992**
Toyama Kinenkan. *Toyama Kinenkan shozobin mokuroku* (Toyama Memorial Museum collection). Vol. 2, *Chukinto, Afurika, Yuroppa* (Near and Middle East, Africa, Europe). Saitama, Japan, 1992.
- Tuzuk 1974**
The Tuzuk-i-Jahāngīrī, or Memoirs of Jahāngīr. Trans. Alexander Rogers and ed. Henry Beveridge. 2 vols. London, 1909. Reprint, Lahore, 1974.
- Vienna 1891**. See Vienna 1892–93
- Vienna 1892–93**
K. K. Österreichisches Handels-Museum. *Oriental Carpets* (English edition). Ed. C. P. Clarke. Exh. cat. 5 vols. Vienna, 1892–93. [For an exhibition held in 1891]
- Walker 1982**
Daniel S. Walker. "Classical Indian Rugs." *Hali* 4, no. 3 (1982), pp. 252–57.
- Walker 1990**
Daniel S. Walker. "Carpets IX: Safavid Period." In *Encyclopedia Iranica*, vol. 4, fasc. 8, pp. 866–75. New York, 1990.
- Walker 1992**
Daniel S. Walker. "Rugs in the Gion Matsuri Preservation Associations." In Kajitani and Yoshida 1992, pp. 173–88.
- Walker 1994**
Daniel S. Walker. "Metropolitan Quartet." *Hali* 76 (August–September 1994), pp. 104–7.
- Washington, D.C., 1974**
Richard Ettinghausen et al. *Prayer Rugs*. Exh. cat., Textile Museum, Washington, D.C., 1974, and Montclair Art Museum, New Jersey, 1975.
- Washington, D.C., 1974–75**. See Washington, D.C., 1974
- Washington, D.C., 1987**
Carol Bier, ed. *Woven from the Soul, Spun from the Heart: Textile Arts of Safavid and Qajar Iran, 16th–19th Centuries*. Exh. cat., Textile Museum. Washington, D.C., 1987. [For an exhibition held in 1987 and 1988]
- Watt 1903**
Sir George Watt, with Percy Brown and Narayani Gupta. *Indian Art at Delhi, 1903: Being the Official Catalogue of the Delhi Exhibition, 1902–1903*. Calcutta, 1903.
- Welch 1978**
Stuart Cary Welch. *Imperial Mughal Painting*. New York, 1978.
- Whiting 1978**
Mark Whiting. "Dye Analysis in Carpet Studies." *Hali* 1, no. 1 (Spring 1978), pp. 39–43.
- Williamstown 1978**
Milo Cleveland Beach, with Stuart Cary Welch. *The Grand Mogul: Imperial Painting in India, 1600–1660*. Exh. cat., Sterling and Francine Clark Art Institute, Williamstown, Mass., Walters Art Gallery, Baltimore, Md., Museum of Fine Arts, Boston, and Asia House Gallery, New York. Williamstown, Mass., 1978. [For an exhibition held in 1978 and 1979]
- Ydema 1986**
Onno Ydema. "Zeldgame herinneringen aan de hof-tapijten van de Groot-Moghil uit Lahore." *Bulletin van het Rijksmuseum* 34, no. 3 (1986), pp. 183–88. [English summary, pp. 205–6]
- Ydema 1991**
Onno Ydema. *Carpets and Their Datings in Netherlandish Paintings, 1540–1700*. Leiden, 1991.
- Zebrowski 1981**
Mark Zebrowski. "Decorative Arts of the Moghol Period." In *The Arts of India*, ed. Basil Gray, pp. 177–89. Oxford, 1981.
- Zebrowski 1983**
Mark Zebrowski. *Deccani Painting*. London, 1983.

Index

Page references to illustrations are in italics.

A

- ‘Abd al-Šamad, 3
 Abū’l Faẓl (historian), 6, 21
 acanthus motif, 121
 Afghans, 3
 Agra:
 building in, 11; figs. 19, 83
 carpets made in, 16, 21, 57
 carpet trade of, 7, 16, 19
 carpet workshops in, 7, 8
 See also Agra Fort; Akbar, Tomb of;
 I‘timād al-Daula, Tomb of; Jahāngīr,
 Palace of
 Agra Fort, 5
 Delhi Gate, panels of, 40
 Shāh Burj, marble dado relief panel, 86,
 88; fig. 83
 Ahmadabad, carpets made in, 8, 12
 A‘īn-i Akbarī (The Institutes of Akbar),
 6, 7
 Akbar, 3
 artistic experiments of, 6, 22
 artistic patronage of, 6, 29, 37–38
 carpet weaving under, 6–8, 29–31, 33,
 76, 118
 carpet workshops of, 29–31
 connoisseurship of, 76
 depictions of, figs. 1, 51
 painting under, 86
 Tomb of, in Sikandra (near Agra), 8,
 32, 81; painted plaster decoration of,
 80, 81; fig. 77
Akbar Hunting Mountain Lions (from
Akbarnāma [The Book of Akbar]),
 52, 57; fig. 51
Akbar Hunting with Cheetahs (from
Akbarnāma [The Book of Akbar]),
 4, 5, 31, 38, 40; fig. 1
Akbarnāma (The Book of Akbar), 6
 Akbar Hunting Mountain Lions from,
 manuscript page, 52, 57; fig. 51
 Akbar Hunting with Cheetahs from,
 manuscript page, 4, 5, 31, 38, 40; fig. 1
 ‘alam (Shi‘ite ceremonial standard), 133
 Alexander the Great, 74
 Aligarh Muslim University, Maulana
 Azad Library (Uttar Pradesh), 86
 Altman, Benjamin, 15
 Amber, carpet workshops in, 12
 Amber Fort (ancestral home of Jaipur
 rajas), 12, 48, 103, 105, 119
 Ames, Frederick L., 38
 Amīr Ḥamza, 5
 Amīr Khusrāu Dihlavī, *Khamsa* (Quintet)
 of, figs. 12, 17
 Anatolian carpets, 119, 138
 animal-combat motif, 44
 animal-head motif, as terminal, 74
 animals leaping, 47
 animals, mythical composite, 37
 “animal style,” in Jahāngīr period, 52
 animated scrolls, 74–77
 Archaeological Museum (Bijapur), 12
 arched flower rugs, 104–5
 architecture, Mughal:
 influence of Persian style on, 31–33
 ornamentation, 29, 32–33, 44
 Arthur M. Sackler Museum (Harvard
 University), 129
 Āšār Maḥal shrine (Bijapur), 12
 Ashmolean Museum (Oxford), fig. 123;
 cat. no. 34
 Assam, carpet materials from, 21
 Aurangabad (Deccan), 129
 Aurangzeb, 8, 14, 129
 carpet weaving under, 14, 117–18, 121, 150
 decline of art patronage under, 14
 depiction of, fig. 4
Aurangzeb and His Third Son, Sultān Ā‘ẓam,
 with Courtiers, manuscript page, 13, 14,
 86, 105, 117; fig. 4
 axes, vertical, 33
 Aynard carpet, 93–95, 94, 133; fig. 92; cat.
 no. 21

B

- Bābur, 3, 11
 autobiography of, illustrated copies
 of, 5
 Badoli, Rajasthan, fig. 26
 Bahmanid state, 3
 Bahura, Gopal Narain, 12
 Barbosa, Duarte (Portuguese trader), 5
 basin, metal, Egypt or Syria, ca. 1240s,
 74, 74; fig. 69
 Beattie, May, report on Jaipur Collection,
 12
 Bell, Robert, 17, 66
 Bengal, 4
 carpet materials from, 21
 carpets made in, 8, 121
 sultanate, 3
 Bharat Kala Bhavan Museum (Varanasi),
 13
 Bichitr:
 Padshāhnāma (The Book of Kings), 11,
 86, 113, 117; manuscript page, *Shāh*
 Jahān Receives His Three Eldest Sons and
 ‘Asaf Khān During His Accession
 Ceremonies from, ca. 1630, 8, 10, 33,
 47, 86, 118; fig. 3
 St. Petersburg Album, watercolor,
 Jahāngīr Preferring a Sufi Shaikh to Kings
 from, ca. 1615–20, 121, 124; fig. 121
 Bidar (Deccan), Huqqa base, fig. 117
 Bijapur, 11, 12, 14
 Bikaner, 117
 Bilaspur (Punjab Hills), 117
 Raja Dip Chand of Bilaspur Listening to
 Singers, watercolor, 117, 117; fig. 115
 bird-head motif, 74
 Blau Collection (New York), 102
 blossoms, segmented, motif, 33, 67
 blue and white knots, mixed, to simulate
 water, 37, 44
 blue ground, 48
 book atelier, royal (*kitābkhāna*), 6, 11
 influence on carpet patterns, 29
 book illustration, relation to carpet
 design, 29, 37–40, 44, 45
 See also illustrated manuscripts
 borders, 35
 intruding into the field of a carpet,
 100
 boteh (leaf-shaped forms), 124
 bracket motif (European), 121
 British Library (London), figs. 13, 16, 82
 British Museum (London), figs. 2, 72, 73
 British rule in India, 14
 See also English
 brocaded carpets and textiles, 12, 129
 confused with carpets, 12, 21
 dating of, 7



- Buccleuch and Queensberry, Duke of, Collection (Northamptonshire), figs. 140, 141; cat. no. 42
- Buddhist texts, references to carpets in, 5
- building materials:
sandstone, 8
white marble, 8, 11, 32
- Burhanpur (Deccan), 11, 129
- Burrell Collection, Glasgow Art Gallery and Museum, 72
- C
- Calico Museum of Textiles (Ahmadabad), 13, 93, 102, 119
- Cambay (Gujarat):
carpets made in, 8
carpet trade of, 5
camel's wool, 21, 22, 23
- Campbell, A. J. D., inventory of Jaipur Collection, 12–14, 15, 104–5
- carpet making:
under Akbar, 6–8
under Aurangzeb, 14
under Jahāngīr, 29–31, 52
under Shāh Jahān, 11, 12, 33, 80, 81, 86, 121
- carpets (general):
European copies of Oriental carpets, 68, 138
function of, in India vs. in Europe, 18–19
history of use of, in India, 5
imported, 7
structure of, fig. 14
technical studies of, 21
See also Indian carpets; Persian carpets
- carpets (specific):
circular, with flower pattern, Northern India, Kashmir or Lahore, ca. 1650, 102, 103; fig. 100; cat. no. 24
with fantastic-animals pattern, Northern India, prob. Fatehpur Sikri, ca. 1580–85, fragment, 5, 26, 29, 33–37, 34, 35, 52, 74, 118; figs. 21, 22; cat. nos. 1a, 1b
with flower pattern, Northern India, Kashmir or Lahore, ca. 1650, 15, 95, 96, 97, 98, 105; figs. 93, 94, 95; cat. nos. 22, 23
with flower pattern, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, ca. 1650, 99, 100; fig. 96
with flower pattern, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, second half of 17th c., fragment, 121, 125; fig. 122
with flower pattern, wool pile on cotton-and-silk foundation, Northern India, Kashmir or Lahore, ca. 1650, fragmentary, 100, 100; fig. 97
with geometric pattern based on a Mamluk Egyptian or Anatolian model, wool pile on cotton foundation, Deccan, early 18th c., 138, 142; fig. 138
with lattice-and-blossoms pattern, Deccan, late 18th c., 68, 138, 141, 146, 147; fig. 137; cat. no. 41
with lattice-and-blossoms pattern, Northern India, Kashmir or Lahore, second half of 17th c., 112, 116; fig. 114; cat. no. 32
with lattice-and-blossoms pattern, silk, Deccan, prob. Hyderabad, late 17th or early 18th c., fragment, 148, 150; fig. 143; cat. no. 43
with lattice-and-blossoms pattern, silk, Deccan, prob. Warangal, 1778–79 (1192 A.H.), 149, 150; fig. 144; cat. no. 44
with lattice-and-flowers-and-vases pattern, wool pile on cotton-and-silk foundation, Northern India, Kashmir or Lahore, ca. 1650, fragment, 107, 109; fig. 107
with lattice-and-flowers pattern, Deccan, ca. 1750 or earlier, 138, 140; fig. 136; cat. no. 40
with lattice-and-flowers pattern, pashmina pile on silk foundation, Northern India, Kashmir, first half of 18th c., 121, 127; fig. 124
with lattice-and-flowers pattern, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, ca. 1650, 22, 22, 28, 106; fig. 7
with lattice-and-flowers pattern, wool pile on cotton-and-silk foundation, Northern India, Kashmir or Lahore, second half of 17th c., 107, 109, 124; fig. 108
with niche-and-flower design, Northern India, Kashmir or Lahore, ca. 1630–40, 90, 92; fig. 89; cat. no. 20
with niche-and-flower design, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, ca. 1630–40, fragment, 24–25, 26, 90; fig. 10
with pictorial design, Northern India, Fatehpur Sikri or Agra, 16th–17th c., fragment, 5, 44–45, 45; fig. 36; cat. no. 5
with pictorial design, Northern India, Lahore, ca. 1590–1600, 5, 38–40, 39, 40–44, 41, 44, 69; figs. 29, 31; cat. nos. 2, 3
with pictorial design, Northern India, Lahore, late 16th or early 17th c., 5, 19, 40, 42, 43, 45–47, 48; figs. 33, 34; cat. no. 4
with pictorial design, wool pile on cotton, wool, and silk foundation, late 16th or early 17th c. (Iran, Sanguszko group), 40, 42; fig. 32
with scrolling-vines-and-animal-heads pattern, Northern India, Lahore, ca. 1610–20, fragment, 22, 24, 27, 37, 69, 72–73, 81, 113; fig. 66; cat. no. 16a
with scrolling-vines-and-animal-heads pattern, Northern India, Lahore, ca. 1610–20, fragment of border, 22, 24, 27, 37, 72–77, 73, 81, 113; figs. 67, 68; cat. nos. 16b, 16c
with scrolling-vines-and-animals pattern, Northern India, Lahore, ca. 1600, fragment, 5, 47–48, 50, 51, 52; figs. 41, 43, 44; cat. nos. 7a, 7b, 7c
with scrolling-vines-and-animals pattern, Northern India, Lahore, ca. 1610, 47–48, 48–49, 52, 66; figs. 39, 40; cat. no. 6
with scrolling-vines-and-animals pattern, Northern India, Lahore, ca. 1610–20, 19, 48, 52, 52, 53, 54; figs. 45, 46, 47; cat. nos. 8, 9
with scrolling-vines-and-animals pattern, Northern India, Lahore, ca. 1620–30, 19, 23, 26, 48, 52, 55, 57; figs. 9, 48; cat. no. 10
with scrolling-vines-and-animals pattern, wool pile on cotton foundation, Northern India, Fatehpur Sikri or Agra, ca. 1640 (Fremlin carpet), 14, 17, 48, 52, 56; fig. 49
with scrolling-vines-and-blossoms pattern, Deccan, ca. 1650, 144, 145, 146; figs. 140, 141; cat. no. 42
with scrolling-vines-and-blossoms pattern, Deccan, ca. 1770, 136–38, 139, 146; fig. 135; cat. no. 39
with scrolling-vines-and-blossoms pattern, Northern India, Lahore, ca. 1620–30, 64, 66; fig. 58; cat. no. 12
with scrolling-vines-and-blossoms pattern, Northern India, Lahore, 1630–32 (Girdlers' carpet), 14, 17, 21, 25, 26, 44, 57, 66, 68–69; figs. 11, 62; cat. no. 14
with scrolling-vines-and-blossoms pattern, Northern India, Lahore, second quarter of 17th c., 67, 70, 146; fig. 64; cat. no. 15
with scrolling-vines-and-blossoms pattern, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, ca. 1650, 81, 84, 85; figs. 80, 81
with scrolling-vines-and-blossoms pattern, wool pile on cotton foundation, Northern India, Lahore, ca. 1620–30, 19, 33, 57–66, 58, 59, 60, 61, 118, 146; figs. 52, 53, 54, 55
with scrolling-vines-and-blossoms pattern, wool pile on flax (or hemp) foundation, England (?), ca. 1618 or 1640 (Kingham carpet), 14, 19, 68–69, 71; fig. 65
shaped, with flower pattern, Northern India, Kashmir or Lahore, ca. 1650, 15, 24, 103, 104; fig. 101; cat. no. 25
shaped, with flower pattern, wool pile on cotton-and-silk foundation, Northern India, Kashmir or Lahore, ca. 1650, 103, 104; fig. 102

- with tree-and-flower pattern, wool pile on cotton-and-silk foundation, Northern India, Kashmir or Lahore, ca. 1650, fragmentary, 102, 102; fig. 99
- with tree pattern, pashmina pile on silk foundation, Northern India, Kashmir or Lahore, ca. 1650, fragmentary, 101, 102; fig. 98
- See also durbar carpets; Herāt-type carpets; Kāshān carpets; medallion carpets; millefleur carpets; pashmina carpets; Persian carpets; Persian-style carpets; Polonaise carpets; Sanguszko-group carpets
- carpet workshops, 8
- grades of carpet produced by, 90, 121
- operations of, 27
- provincial, under Aurangzeb and later, 117
- See also carpet workshops, imperial
- carpet workshops, imperial (*farrāshkhāna*), 6–7, 12, 29–31, 117
- under Akbar, 29–31
- decline of, under Aurangzeb, 117
- under Shāh Jahān, 12
- cartoons (weaving instructions; *ta‘līm*), 27, 29, 90, 104
- cartouche-and-medallion design, 40, 48
- cashmere, 22
- See also pashmina
- Caucasian rugs, 136
- Central Asia:
- imported materials from, 21
- weavers from, 7
- chahār bāgh* (Persian garden) motif, 118
- Chihil Sutūn (Hall of Forty Columns) (Isfahan), 112, 117
- China, carpet materials from, 21
- Chinese art, influence of, on Indian art, 88
- Chinese-style rugs, 136
- Chingiz Khan, 3
- chintzes, 129
- Chitarman, *Shāh Jahān Nimbed in Glory*, watercolor, 1627–28, 22, 22; fig. 8
- Cincinnati Art Museum, figs. 20, 101, 144; cat. nos. 25, 44
- circular carpets, 66, 102
- with flower pattern, Northern India, Kashmir or Lahore, ca. 1650, 102, 103; fig. 100; cat. no. 24
- City Palace Museum (Maharaja Sawai Man Singh II Museum) (Jaipur, India), 13, 106
- Clam-Gallas carpet, 90–93, 93; fig. 91
- cloud-wisp motifs, 88, 95, 105
- cochineal, 24, 74
- Cohen, Steven, 37
- color mixing (juxtaposition of knots of different colors), 24–26, 74, 76, 107
- colors of carpets, 23–27
- Europeanized use of, 26
- experimental use of, 37
- multicolors, 22
- Persian vs. Indian, differences in use of, 68, 76
- silhouetted, 44, 45, 67
- See also color mixing; shading
- compartmented carpet pattern, figs. 90, 91
- composite animals, 37
- Corcoran Gallery of Art (Washington, D.C.), figs. 63, 64; cat. no. 15
- Coromandel Coast, trade with, 20
- cotton, 21–22, 77, 133
- court workshops, 6, 7, 8
- See also carpet workshops, imperial
- ## D
- The Dancing Dog*, oil on canvas (Jacob Ochtervelt), 18, 20, 146; fig. 6
- Dar al-Athar al-Islamiyyah, Kuwait Museum of Islamic Art, fig. 143; cat. no. 43
- Dārā Shikūh, Prince, 11
- Dārā Shikūh Album, 86
- An Iris Plant and Butterfly* from, 86, 87; fig. 82
- Datta, 8
- Daulatabad, 5
- David Collection (Copenhagen), fig. 51
- Deccan, The, 3
- carpets made in, 20, 21, 22, 24, 68, 119, 129–36, 146, 150; figs. 135, 136, 137, 138, 140; cat. nos. 39, 40, 41, 42
- carpet workshops in, 7, 14, 117
- courts, Persian influence on, 29
- darbar carpets, fig. 119; cat. no. 33
- Mughal expansion into, 11, 14, 129
- painting, 121
- star-medallion carpet, fig. 139
- textiles made in, 129
- Deccan, The, prob. Burhanpur, floor cover, fig. 116
- Deccan, The, prob. Hyderabad, carpets, fig. 143; cat. no. 43
- Deccan, The, prob. Warangal:
- carpets, fig. 144; cat. no. 44
- prayer carpets (*saph*), figs. 130, 132; cat. nos. 37, 38
- Delhi, 5
- building in, 11; figs. 84, 85
- as capital, 11
- Nautch Party in a European Mansion*, watercolor, 124, 129; fig. 126
- workshops in, 14
- See also Red Fort
- Delhi Sultanate, 3
- Detroit Institute of Arts, figs. 21, 58; cat. nos. 1a, 12
- dhurries (cotton flat weaves), 129
- diamond lattice form, 121
- Dilley, Arthur U., 121
- Diu island (Gujarat), 5
- Downton (English agent), 8
- drawlooms, 31, 33
- drop-repeat carpet pattern, 57
- darbar carpets, 14, 113, 118–19, 121
- with medallion-and-garden design, wool pile on cotton foundation, Northern India, ca. 1650, 118, 120; fig. 118
- with medallion design, Deccan, second half of 17th c., 119, 122, 123; figs. 119, 120; cat. no. 33
- Dutch:
- trade with India, 15, 19–20; with Japan, 57, 146
- Dutch East India Company (V.O.C., Vereenigde Oost-Indische Compagnie), 8, 19
- Dutch paintings, carpets depicted in, 138, 146; figs. 5, 6
- dyes, 23–27; Appendix 2
- research on, 23–24
- ## E
- East India Company (English), 8, 15–17, 19
- Egypt, 74
- carpets from, 138
- Egypt or Syria, basin from, fig. 69
- elephants:
- combat motif, 44, 67
- depiction of, 76
- Ellis, Charles Grant, 102, 134–36, 138
- Ellore (modern Eluru, Deccan):
- carpets made in, 129
- carpet workshops in, 7
- Emperor Jahāngīr Weighs Prince Khurram* (from *Tuzuk-i Jahāngīrī* [The Memoirs of Jahāngīr]), 8, 9, 33, 47, 76, 76, 118; figs. 2, 72
- ends (carpet), structure of, 28
- English, trade with India, 8, 15–19
- English carpets, fig. 65
- European art:
- influence of, on Mughal art, 26–27, 37, 74, 86–87, 121
- motifs of, in Indian art, 121
- European copies of Oriental carpets, 68, 138; fig. 65
- European private collections, 80, 150; fig. 95; cat. no. 23
- export goods:
- for Dutch–Japanese trade, 146
- not usually a separate category, in Indian trade, 19
- ## F
- fantastic-animal-pattern carpets, 33–38
- pair of (reconstruction), fig. 24
- pattern of, fig. 25
- pattern units of, figs. 22, 23
- See also under carpets (specific)
- fantastic animals motif, 37
- farrāshkhāna* (carpet-production house), Akbar's, 6–7
- fire of 1579 in, 6, 29
- farsh-i chandāni* (sandalwood-colored rugs), 95
- Fatehpur Sikri, fig. 18
- Akbar's capital at, 6
- carpets made in, 12, 21, 29, 37, 45–47, 57
- carpet workshops in, 7, 8



Fatehpur Sikri (*continued*):
 palace complex at, 5
 stone panels carved in relief at, Persian influence on, 31
See also Turkish sultana's house
 fibers used in Indian carpets, 21–23, 24, 69; Appendix 1
 figural imagery, rise and decline of, 52
 fine-weave carpets, 68–81
 flat-weave carpets, 7
 flax, 68
 floor cover, cotton, Deccan, probably Burhanpur, late 17th or early 18th c., 117, 118; fig. 116
 flower-and-niche carpet pattern, 95
 flower-bouquets-in-vases carpet pattern, 107
 flower carpets (Indian), 14, 33, 81, 86–117
 attributions and provenance of, 113–17
 shaped, proposed configuration of, fig. 103
 See also under carpets (specific)
 flowers, naturalistic representation of, 86–88
 flowers-or-trees-in-rows carpet pattern, 95–105
 flower style in Indian art, 86–88, 117, 121, 150
 foundation (carpet), materials used for, 21–22, 69, 77, 133
 Freer Gallery of Art (Washington, D.C.), figs. 69, 121
 Fremlin, William, 17–18, 48
 Fremlin carpet, 14, 17, 48, 52, 56; fig. 49
 Frick Collection (New York), figs. 96, 98
 fringes:
 multicolored, 22
 structure of, 28

G

gaja-simha (lion–elephant composite animal) motif, 38, 67
 garden (*chahār bāgh*) motif, 118
 Gaur (Bengal), 5
 gavia motif, 67
 geometric pattern carpet, based on a Mamluk Egyptian or Anatolian model, wool pile on cotton foundation, Deccan, early 18th c., 138, 142; fig. 138
 Ghurids, 3
gilim, generic term for flat-weave carpets, 7
 Gion Matsuri festival, 66
 procession through the streets of Kyoto, fig. 60
 Gion Matsuri Kanko-boko Preservation Association (Kyoto, Japan), 20, 136; fig. 135; cat. no. 39
 Collection, 138
 Gion Matsuri Kita-Kannon-yama Preservation Association (Kyoto, Japan), figs. 136, 138, 139; cat. no. 40
 Gion Matsuri Minami-Kannon-yama

Preservation Association (Kyoto, Japan), fig. 137; cat. no. 41
 Gion Matsuri Tsuki-boko Preservation Association (Kyoto, Japan), fig. 59; cat. no. 13
 Girdlers' carpet, 14, 17, 21, 25, 26, 44, 57, 66, 68–69; figs. 11, 62; cat. no. 14
 Girdlers' Company, 17, 66
 Glasgow Art Gallery and Museum, 72
 Goa, 19
 goats, Himalayan mountain (*Capra hircus laniger*), 22
 goat's wool, 21
 See also pashmina
 Golconda, 11, 14, 129
 Golestān Palace (Tehran), 86
 Government Central Museum (Jaipur), 13; figs. 61, 100; cat. no. 24
 grape-cluster motif, 33, 67
 Great Album of Jahāngīr. *See* Jahāngīr Album
 grotesque carpets. *See* fantastic-animal-pattern carpets
 grotesques, European, 37, 74
 guard stripes, 35, 146
 Gujarat:
 carpets made in, 12, 21
 carpet trade of, 5–6
 sultanate, 3

H

Hall of Private Audience (Delhi), 87
 Hall of Public Audience (Agra), 11
 Ham House (Richmond, England), 19
Hamzanāma (The Book of Ḥamza), 5, 37, 45
 Qubād Being Killed While He Sleeps from, manuscript page, 44, 44; fig. 35
 hangings, 128
 influence on carpets, 124
 millefleur style, pashmina, twill-tapestry weave, Northern India, Kashmir, ca. 1800, 128, 130; fig. 127
 Hannover, a collection in, 57
 Hecken, Abraham van der, *A Philosopher in His Studio*, oil on canvas, ca. 1650, 17, 20; fig. 5
 hemp, 68
 Hendley, Colonel T. H., inventory of Jaipur Collection, 12, 15
 Herāt (Iran), carpets possibly made in, in Timurid period, 74
 Herāt-type carpets, 23, 26, 33, 47, 57, 67, 81, 90, 118–19, 136
 with compartment design, pashmina and cotton pile on silk foundation, Iran, second half of 16th c., fragments, 23, 90–93, 93, 103; fig. 90
 with compartment design, wool pile on cotton-and-wool foundation, Iran, last quarter of 16th c. (Clam-Gallas carpet), 90–93, 93; fig. 91
 with scrolling-vines-and-blossoms pattern, wool pile on cotton-and-silk

foundation, Iran, first quarter of 17th c., 57, 67, 70, 146; fig. 63
 with scrolling-vines-and-blossoms pattern, wool pile on cotton-and-silk foundation, Iran, last quarter of 16th c., fragment, 32, 33, 47, 57, 80, 81; figs. 20, 76
 herbals (plant books), European, Mughal artists' knowledge of, 86–87
 Hindu epics, illustrated copies of, 5
 Hindus:
 literature, 5, 11
 music, 11
 relations with Muslims, 11, 14
 religion of, under the Muslims, 3, 11
 temples, 11, 37
 Hodgkin, Howard, Collection, figs. 43, 44; cat. nos. 7b, 7c
 Holbeins, large-pattern, 138
 Humāyūn, 3, 103
 hunting scenes, 38; figs. 1, 51
 Huqqa base, metal, Bidar (Deccan), last quarter of 17th c., 117, 118; fig. 117
 Husāin Naqqāsh, *Khamsa* (Quintet) of Amīr Khusrau Dihlavi, illuminated roundel, Lahore, 1597–98, 26, 27; fig. 12
 Hyderabad, 80, 129; fig. 134
 carpets made in, 150
 nizam of, collection, 134
 See also Jāmi Mosque

I

Ibn-Battūta, 5
 Ilchester, Earls of, Collection, 19
 illustrated manuscripts, 5
 influence on carpet design, 29, 31, 44
 use of, by Mughal artists, as reference tools, 77
 See also book illustration
 in-and-out palmette designs, 33, 81
 India:
 carpet trade of, 16, 19
 history of Mughal era, 3–14
 private trade with, 16
 trade routes to (sea vs. overland), 15
 Indian art. *See* Mughal art
 Indian carpets:
 in collections outside India, 14, 15, 20, 66, 117, 136–47
 demand for, in West, 16
 depicted in paintings, 20, 118, 121, 124, 146; figs. 5, 6
 design influence of book illustration on, 29, 31, 44
 design influence of textiles on, 31, 47
 eighteenth-century trade in, differences from earlier trade, 20
 exports of, from India to West, 19
 finest, materials used in, 22
 grades of, 90, 121
 international commerce in, 15–20
 large, 40, 118–19
 later types of, 117–50

- materials used for, 21–23, 24, 69;
 Appendix 1
 modeled on Persian carpets, 32, 33, 81,
 90–95, 121
 motifs of, 67
 numbers surviving, 15
 provenance, information lacking on, 15
 specially ordered (bespoke), problems
 with, 16
 structure of, 27–28
 style of, as distinguished from Persian
 carpets, 33, 67–68
 technical characteristics of, 21–28
 terminology for, 7
 unusual shapes of, 102–5
See also carpets (specific); Persian-style
 carpets
- Indo-Persian-type carpets, 57, 90, 119, 121,
 133, 136, 138
- intarsia work, 44
- interlocking compartment design, 118
- Iran, 3
 artists from (émigrés), 31
 carpet materials from, 21
 court patronage of art, 29
 exports of manuscripts and furnishings
 from, 31
 weavers from, 7, 21, 27, 117, 133
See also Persian art
- An Iris Plant and Butterfly* (from Dārā
 Shikūh Album), 86, 87; fig. 82
- Islam, in India, 3, 11, 14
- Islamic metalwork, 74–76
- Islam Khan, 12
- Iʿtimād al-Daula, Tomb of, in Agra, 8,
 32, 86
 inlaid decoration, 31, 32; fig. 19
- J
- Jahāngīr, 16
 carpet weaving under, 29–31, 33, 47, 52,
 76, 80, 118
 connoisseurship of, 8, 23, 68, 76
 depiction of, fig. 2
 painting under, 8, 86
 Palace of (Agra), 5
 reign of, 8
 Tomb of (Lahore), 87
 visit to Kashmir in 1620, 86
- Jahāngīr Album, 31, 86
 margin illumination from, 76, 76; fig. 71
 page from, 52, 57; fig. 50
- Jahāngīr in Private Audience* (Manohar), 77,
 77; fig. 73
- Jahāngīr Preferring a Sufi Shaikh to Kings*
 (from St. Petersburg Album, Bichitr),
 121, 124; fig. 121
- Jaipur, maharaja of, 12
- Jaipur Collection, 12–14, 15, 33, 48, 66, 81,
 95, 102, 103–5, 106, 117, 118, 138, 147;
 figs. 28, 97, 118
 studies and inventories of, 12–15, 104–5
- Jāmī Mosque, Hyderabad, *saph* pattern in
 courtyard of, 134, 136; fig. 134
- Japan:
 collections in, 20
 Western trade with, 19–20, 57
- Japanese imperial collection, 20
- Jaunpur:
 carpets made in, 8, 19
 sultanate, 3
- Jazira, 74
- Jesuits, 26
- jizya* (poll tax on non-Muslims), 14
- Jodhpur, 117
- Johns Hopkins University (Baltimore),
 fig. 70
- juftī* knot (paired or “false” knot), 27, 74;
 fig. 15
- K
- Kachhwāha clan, 12
- Kajitani, Nobuko, 138
- Kāshān, 24
- Kāshān-type carpets, 40–44
- Kashmir:
 carpet materials from, 23
 carpets made in, 12, 113, 119, 129
 imperial carpet workshops in, 12
 Jahāngīr’s visit to, 86
 shawl weaving in, 23, 113, 124
 sultanate, 3
 textiles from, as hangings, 128
- kateha* (term for pile-woven carpet), 5
- Keir Collection (Richmond, England),
 107
- Kestner-Museum, Hannover, 72
- Kevorkian Album, 11
- Kevorkian sale, 15
- Khamsa* (Quintet) of Amīr Khusrau
 Dihlavi:
 illustrated by Husaīn Naqqāsh, 26, 27;
 fig. 12
 manuscript page of (Lahore, 1597–98),
 30, 31, 45; fig. 17
- Khamsa* (Quintet) of Nizami, manuscript
 page, 30, 31; fig. 16
- Khāndesh, sultanate, 3
- Khorāsān (Iran), 5
 carpets made in, 27
- Kinghorne carpet, 14, 19, 68–69, 71;
 fig. 65
- Kinghorne family, Collection, 19
- kirtimukha* (monster mask), 37
- kitābkhāna* (book-production workshop),
 6, 11, 29
- Knole (Sackville-West house), 19, 40, 138
- knots:
 fineness of weave of, 27–28, 106
 illustration of, fig. 15
 types of, 24, 27, 74
- Krishna Enthroned, Attended by Gopis* (from
Rāgamālā [Garland of Memories,
 dispersed set]), 146, 147; fig. 142
- Kunstmuseum Düsseldorf, 105
- Kyoto (Japan), Indian carpets in, 14, 20,
 66, 117, 136–47
- Kyoto-group carpets, 136–47
- L
- lac, 24
- Ladakh, wool trade of, 23
- Lahore:
 building in, 11
 carpets made in, 8, 14, 16, 21, 44, 57, 67,
 68, 113, 119, 129
 carpet trade of, 14, 15–16, 119
 carpet workshops in, 7, 12
 Mughal capital at, 5
 shawl weaving in, 23
See also Jahāngīr, Tomb of
- Lahore carpets, as term, 15–16
- Lahore Fort, exterior tilework, 44
- landscapes:
 northern European style, 26
 Persian style, 31
 on rugs, 40
- lattice-and-blossoms carpet pattern,
 107–13
- lattice-and-flowers carpet pattern, 105–7
- lattice-form carpet pattern, 121
See also under carpets (specific)
- leaf, serrated, motif, 121
- Lilian, Salomon, Collection, fig. 5
- Lodī dynasty, 3
- looms, 27, 31; fig. 13
- Los Angeles County Museum of Art,
 107; fig. 37
- lotus motif, 121
- Lutyens, Sir Edward, 11
- M
- madder dyes, 24
- Maharaja Sawai Man Singh II Museum
 (City Palace Museum) (Jaipur,
 India), fig. 106; cat. no. 28
- Mahmūd Bīqara (Gujarati sultan), 5
- makara-torana arch, 37
- Makdisī (historian), 5
- Malwa, sultanate, 3
- Mamluk carpets, 119, 138
- Manohar (painter), 77
Jahāngīr in Private Audience, watercolor,
 77, 77; fig. 73
- Manṣūr (painter), 86
 flower paintings of, 86–88, 95
- Manucci (physician), 14
- manuscript pages:
Akbar Hunting Mountain Lions from
Akbarnāma (The Book of Akbar),
 52, 57; fig. 51
Akbar Hunting with Cheetahs from
Akbarnāma (The Book of Akbar),
 4, 5, 31, 38, 40; fig. 1
Aurangzeb and His Third Son, Sulṭān Ḍʿzam,
 with Courtiers, 13, 14, 86, 105, 117; fig. 4
Emperor Jahāngīr Weighs Prince Khurram
 from *Tuzuk-i Jahāngīrī* (The Memoirs
 of Jahāngīr), 8, 9, 47, 76, 76, 118;
 figs. 2, 72
 margin of a folio, with flower pattern,
 ca. 1620–30, 87, 89; fig. 86

- manuscript pages (*continued*):
 margin of a folio, with flower pattern,
 ca. 1645, 87, 89; fig. 87
Qubād Being Killed While He Sleeps from
Hamzanāma (The Book of *Hamza*),
 44, 44; fig. 35
Razmnāma, 37, 38; fig. 28
Shāh Jahān Receives His Three Eldest Sons
 and *ʿAṣaf Khān During His Accession*
Ceremonies from *Pādshāhnāma* (The
 Book of Kings, Bichitr), 8, 10, 33, 47,
 86, 118; fig. 3
Timur Granting an Audience in Balkh on the
Occasion of His Accession to Power in April
1370 from *Zafarnāma* (Book of
 Conquests), 75, 76; fig. 70
 manuscript paintings, Mughal, with
 landscapes in a northern European
 style, 26
 manuscripts:
 Akbar period, 37
 Persian, 31
See also illustrated manuscripts
 Marathas, 14
 Martin, F. R., 74
 Masulipatnam:
 carpets made in, 133
 trade with, 20
 medallion carpets, 29
 circular, wool pile on cotton founda-
 tion, Northern India, ca. 1620–30,
 66, 67; fig. 61
 from Northern India, Lahore,
 ca. 1620–30, 57, 62, 63, 65, 66, 118;
 figs. 56, 57, 59; cat. nos. 11, 13
 Persian, 119
 with scrolling-vines-and-animals
 pattern, wool pile on cotton, wool,
 and silk foundation, Iran, Sanguszko
 group, late 16th or early 17th c.
 (Sanguszko carpet), 33, 40, 46, 47,
 48; fig. 38
 metallic thread, 21
 metalwork, 74–76
 Metropolitan Museum of Art, The
 (New York), 15, 80, 121; figs. 8, 10, 17,
 33, 54, 78, 80, 89, 93, 109, 111, 116, 117,
 127, 129; cat. nos. 4, 18, 20, 22, 29,
 30, 36
 millefleur carpets, 119–29
 with small medallions, pashmina pile
 on cotton-and-silk foundation,
 Northern India, Kashmir, second
 half of 18th c., 107, 124, 128; fig. 125
See also under pashmina carpets
 Minto Album, 11
 mirror-image patterns, 33
 Mir Sayyid ʿAlī, 3
 Mīrza Raja of Amber, 105
 Mongols, 3
 Monserrate, Antonio (missionary), 6
 Morris, William, advice of, in buying
 carpets, 38
 Mughal art:
 beginnings of, 3
 Chinese influence on, 88
 distinguished from Persian art, 31, 33,
 67, 68, 76
 essential features of, 5
 European influences on, 26–27, 37,
 86–87, 121
 influence of, on Persian art, 117
 Islamic traditions in, 74
 motifs of, 33, 67, 119
 naturalism in, 5, 8, 31, 76, 86–88, 129
 Persian influence on, 29, 31–33, 86, 88
 synthesis of artistic traditions in, 5, 88
 Mughal court:
 Persian influence on, 29
 Westerners' gifts to, possible artistic
 influence of, 26–27
 Mughal empire in India, 3–5, 129
 a brief history of, 3–14
 decline of, 14
 Mughal royal library, 76–80
 Muḥammad Shāh, 14
 Muḥammad Zāhir Shāh, king of
 Afghanistan, collection, 150
 Multan (Punjab), 5
 carpets made in, 119, 129
 carpet workshops in, 12
 multiple-niche prayer-type carpets (*saphs*),
 129–36
 Mumtāz Maḥal, 11
 Mundy, Peter, 11
 Musée des Arts Décoratifs (Paris),
 figs. 32, 66, 68; cat. nos. 16a, 16c
 Museu Calouste Gulbenkian (Lisbon),
 102; figs. 56, 74, 113; cat. nos. 11, 17, 31
 Museum für Islamische Kunst, Staatliche
 Museen zu Berlin–Preussischer
 Kulturbesitz, fig. 39; cat. no. 6
 Museum für Kunst und Gewerbe
 (Hamburg), fig. 124
 Museum of Fine Arts (Boston), 69–72,
 90; figs. 29, 102; cat. no. 2
 Museu Nacional de Arte Antiga
 (Lisbon), 19
 Museu Nacional de Machado de Castro
 (Coimbra), 19
 Muslims, relations with Hindus, 11, 14
 Mystic House (Agra), 103
- N**
- Nāder Shāh, 11, 14
 Nagasaki (Japan), Western trade at, 19
 Náprstek Museum (Prague), fig. 50
 National Gallery of Art (Washington,
 D.C.), fig. 48; cat. no. 10
 Nationalmuseum (Stockholm), figs. 6,
 67; cat. no. 16b
 naturalism, 5, 8, 31, 76, 86–88
 loss of, with stylization, 87–88, 129
 nature illustration, in Mughal art, 5
Nautch Party in a European Mansion,
 watercolor, 124, 129; fig. 126
 Nels, Paul, Collection (London), fig. 122
 niche-style carpets, 90, 95, 119, 124–29
See also under carpets (specific); pashmina
 carpets
- Nizami, *Khamsa* (Quintet) of, 30, 31;
 fig. 16
 Northern Deccan, *Rāgamālā* (Garland of
 Memories, dispersed set), watercolor,
 147; fig. 142
 Northern India:
 carpets from, 113, 129
 durbar carpet, fig. 118
 medallion carpet, circular, fig. 61
 Northern India, Fatehpur Sikri or Agra:
 carpet, fig. 36; cat. no. 5
 Fremlin carpet, fig. 49
 Northern India, Kashmir:
 carpet, fig. 124
 hanging, fig. 127
 millefleur carpet, fig. 125
 pashmina carpets, figs. 128, 129;
 cat. nos. 35, 36
 Northern India, Kashmir or Lahore:
 carpets, figs. 7, 10, 80, 89, 92, 93, 95, 96,
 97, 98, 99, 100, 101, 102, 107, 108, 114,
 122; cat. nos. 20, 21, 22, 23, 24, 25, 32
 pashmina carpets, figs. 74, 78, 88, 104,
 105, 106, 109, 111, 113, 123; cat. nos. 17,
 18, 19, 26, 27, 28, 29, 30, 31, 34
 Northern India, Lahore:
 carpets, figs. 29, 31, 33, 39, 41, 43, 44, 45,
 47, 48, 52, 54, 58, 64, 66, 67, 68; cat.
 nos. 2, 3, 4, 6, 7a, 7b, 7c, 8, 9, 10, 12,
 15, 16a, 16b, 16c
 Girdlers' carpet, figs. 11, 62; cat. no. 14
 medallion carpets, figs. 56, 59; cat. nos.
 11, 13
 Northern India, prob. Fatehpur Sikri,
 carpets, figs. 21, 22; cat. nos. 1a, 1b
 Nūr Jahān, 8, 95
- O**
- Ochtersvelt, Jacob, *The Dancing Dog*, oil
 on canvas, ca. 1671–73, 18, 20, 146;
 fig. 6
 octagonal carpets, 102–3
 oil-on-canvas paintings depicting carpets:
The Dancing Dog (Jacob Ochtersvelt), 18,
 20, 146; fig. 6
A Philosopher in His Studio (Abraham van
 der Hecken), 17, 20; fig. 5
 Orchha, 8
 Orendi, Julius, 150
 Oriental carpets:
 as covers for tables and chests, in
 Europe, 19
 depicted in Dutch paintings, 17, 18, 20,
 146; figs. 5, 6
 European copies of, 68, 138
 as status symbols in England, 15
 ornamentation in Mughal art:
 architectural, 29, 32–33, 44
 influence of book-atelier artists on, 29
 reduction of scale of, 121
 Österreichisches Museum für
 Angewandte Kunst (Vienna), 146;
 figs. 31, 91, 128; cat. nos. 3, 35
 Ottoman Empire, 12

P

Pādshāhnāma (The Book of Kings), 11, 86, 113, 117
Shāh Jahān Receives His Three Eldest Sons and 'Asaf Khān During His Accession Ceremonies, manuscript page (Bichitr), 8, 10, 33, 47, 86, 118; fig. 3
 painting:
 under Akbar, 40, 86
 under Aurangzeb, 14
 flower style in, 121
 under Jahāngīr, 8, 86
 Paithan (Deccan), 129
 pashmina (goat's wool), 21, 22–23, 77–78, 93, 118, 147
 pashmina carpets, 22, 80–81, 100–102, 105–7, 121
 centers of production of, 113
 with lattice-and-blossoms pattern, Northern India, Kashmir or Lahore, ca. 1650, fragment, 112, 115; fig. 113; cat. no. 31
 with lattice-and-blossoms pattern, Northern India, Kashmir or Lahore, ca. 1650, fragments, 107, 110, 111, 112, 112–13, 114; figs. 109, 110, 111, 112; cat. nos. 29, 30
 with lattice-and-flowers pattern, Northern India, Kashmir or Lahore, ca. 1650, fragment, 105–6, 107, 107; fig. 105; cat. no. 27
 with lattice-and-flowers pattern, Northern India, Kashmir or Lahore, ca. 1650 (in a Jaipur collection), 106, 108; fig. 106; cat. no. 28
 with lattice-and-flowers pattern, Northern India, Kashmir or Lahore, ca. 1650 (in a private collection), 81, 105, 106; fig. 104, frontispiece; cat. no. 26
 with millefleur pattern, Northern India, Kashmir or Lahore, second half of 17th c., 121, 126; fig. 123; cat. no. 34
 with niche-and-flower design, Northern India, Kashmir or Lahore, ca. 1630–40, 90, 91; fig. 88; cat. no. 19
 with niche-and-flower design, Northern India, Kashmir or Lahore, ca. 1630–40, 93–95, 94, 133; fig. 92; cat. no. 21
 with niche-and-millefleur design, Northern India, Kashmir, first half of 18th c., 128–29, 131; fig. 128; cat. no. 35
 with niche-and-millefleur design, Northern India, Kashmir, second half of 18th c., 129, 132; fig. 129; cat. no. 36
 with scrolling-vines-and-blossoms pattern, Northern India, Kashmir or Lahore, ca. 1620–25, fragment, 78, 79, 80, 107; figs. 74, 75; cat. no. 17
 with scrolling-vines-and-blossoms pattern, Northern India, Kashmir or

Lahore, ca. 1650, fragment, 81, 82, 83; figs. 78, 79; cat. no. 18
 patterns:
 mirror-image, 33
 repetition of, 31–32, 33, 67, 119
 units of, figs. 25, 42
 Peacock Throne, 11
 Pelsaert, Francis, 8
 Persia. *See* Iran
 Persian art, 74–80
 distinguished from Mughal art, 31, 67, 68, 76
 influence of, on Indian art, 29, 86, 88
 influence of Mughal art on, 117
 motifs of, 33, 57, 119
 Persian carpets (made in Iran), 117, 119, 138
 demand for, in West, 16
 distinguished from Indian carpets, 21, 26, 67–68, 76
 exports of, from India to West, 19
 history of use of, in India, 5
 imports of, into India, 7
 Indian carpets modeled on, 32, 33, 81, 90–95, 121
 materials used for, 21, 23, 24, 26
 pictorial, 40
 quality distinctions of, 90
 status appeal of, in India, 33
 See also Herāt-type carpets; Indo-Persian-type carpets; Kāshān-type carpets; Polonaise carpets; Sanguszko-group carpets; vase carpets
 Persian knot (asymmetrical), 24, 27; fig. 15
 Persian-style carpets (made in India), 29–81, 90–95, 113, 121
 beginnings of, in India, 33
 decline of demand for, 117
 differences from actual Persian carpets, 21, 26, 67–68, 76
 status appeal of, in Mughal court, 81
 the term, 33
 Philadelphia Museum of Art, 133
A Philosopher in His Studio, oil on canvas, ca. 1650 (Abraham van der Hecken), 17, 20; fig. 5
 pictorial carpets, 29, 37–47
 See also under carpets (specific)
 pietra dura technique, 87, 88; fig. 84
 pile:
 length of, 28
 materials used for, 22–23, 77–78, 90–95, 133
A Pile-Carpet Loom at Humsur, drawing, 27, 27; fig. 13
 pile carpets:
 beginnings of, 5–6, 7, 29
 made for prayer rugs, 133
 method of making, 31–32
 mistakenly taken for brocaded cloth, 12
 Polonaise carpets of Iran (so-called), 12, 21, 90, 136
 polygonal carpets, 102–3
 Portuguese:
 Mughal campaign against, 8
 trade with India, 15, 19

powder flask, ivory, first half of 17th c., 37, 38; fig. 27
 prayer carpets (*saphs*), 129–34
 carpets unlikely to have been used as, 95, 128
 multiple-niche pattern, 129–36
 Deccan, prob. Warangal, 18th c., 21, 133, 134–35, 136–37, 146; figs. 130, 131, 132, 133; cat. nos. 37, 38
Prince with a Falcon, watercolor, 45, 45; fig. 37
 Private collections, figs. 4, 45, 86, 87, 88, 99, 114, 119, 130, 142; cat. nos. 8, 19, 32, 33, 37
See also European private collections

Q

qanāts (tent screens), 95, 133
Qubād Being Killed While He Sleeps (from *Hamzanāma* [The Book of Hamza]), 44, 44; fig. 35

R

Rāgamālā (Garland of Memories, dispersed set), *Krishna Enthroned, Attended by Gopis* from, watercolor, 146, 147; fig. 142
Raja Dip Chand of Bilaspur Listening to Singers, watercolor, 117, 117; fig. 115
 Raja Man Singh (of Jaipur), 12
 rajas, local, court styles of, 117
 Rajput chiefs, 3, 4, 14
 Rajput painting, 121
 Rampur, 117
Razmnāma, manuscript page from, 37, 38; fig. 28
 red dyes, 24
 Red Fort, Delhi:
 Ārāmgāh, gilded ceiling with flower pattern, 87, 89, 113; fig. 85
 Hall of Private Audience, *pietra dura* panel, 87, 88; fig. 84
 religions of India, 5
 conflict between Hindus and Muslims, 11, 14
 repeating patterns, 31–32, 33, 67, 119
 Roe, Sir Thomas, 8, 16, 26
 Royal Collection, Windsor Castle, fig. 3
 Royal Museum of Scotland, fig. 65
 rugs. *See* carpets
rumal carpets, 106
 runners (mats), 102
 Rutland, Duke of, Collection, 19

S

Sackville-West Collection, 40
 Safavid art:
 distinguished from Mughal art, 31
 influence of Mughal art on, 117
See also Persian art

- Safavid dynasty, 3
 St. Petersburg Album, *Jahāngīr Preferring a Sufi Shaikh to Kings* from, watercolor (Bichitr), 121, 124; fig. 121
 Samarkand, 11
 Sanguszko-group carpets, 33, 40–44, 47, 66
 with pictorial design, wool pile on cotton, wool, and silk foundation, late 16th or early 17th c., 40, 42; fig. 32
 the Sanguszko carpet (so-called), medallion carpet, 33, 40, 46, 47, 48; fig. 38
saphs. See multiple-niche prayer-type carpets
 scrolling-vine carpet patterns. See under carpets (specific)
 scrolling-vine-and-animal carpet pattern, 45–57
 pattern unit of, fig. 42
 scrolling-vine-and-blossom carpet pattern, 57–69
 scrolling-vine-and-palmettes carpet pattern, 29, 47
 scrolling-vine-with-animal-heads carpet pattern, 74–77
 scrolls, animated, 74–77
 shading, 26–27, 74, 76, 90, 107
 Shāh ‘Abbās, 112
 Shāh Jahān:
 building under, 11
 carpet making under, 11–14, 33, 80, 81, 86, 121
 connoisseurship of, 76
 depictions of, figs. 3, 8
 flower style developed under, 86–88, 95, 113
Shāh Jahān Nimbed in Glory, watercolor (Chitarman), 22, 22; fig. 8
Shāh Jahān Receives His Three Eldest Sons and ‘Asaf Khān During His Accession Ceremonies (from *Pādshāhnāma* [The Book of Kings]) (Bichitr), 8, 10, 33, 47, 86, 118; fig. 3
 shaped carpets, 102–5
 See also under carpets (specific)
 shawls, 22, 23, 113, 124
 influence on carpets, 124
 sheep’s wool, 21, 22, 23, 77
 Shinjishumeikai (Japan), fig. 38
 Shīr Shāh Sūr, 3, 5
 side finish, structure of, 28
 “silhouette style” (color against color technique), 44, 45, 67
 silk, 21, 22, 77, 118, 147
 predyed, from Iran, 24
 wild, uncultivated (tussah), 21
 silk carpets, 147–50
 simurgh (mythological bird), 38
Simurgh Attacking a Gaja-simha Clutching Seven Elephants in Its Claws, watercolor, 40, 40; fig. 30
 Singh, Dr. Chandramani, 12
 single-flower-design carpets, 88–95
 South India, Mysore, *A Pile-Carpet Loom at Hunsur*, drawing, 27, 27; fig. 13
 Staatliche Kunstsammlungen Dresden, fig. 27
 Staatsbibliothek zu Berlin–Orientabteilung, fig. 71
 star-medallion carpets, 138
 wool pile on cotton-and-wool foundation, Deccan, ca. 1790, 138, 143; fig. 139
 Sunni Muslims, as rulers, 3
 Surat:
 carpets made in, 12
 carpet trade of, 15, 16, 19
 symmetry in carpet design, 33, 47
 Syria, 74
 T
 Tahmāsp, Shah (Persia), 3
 Taj Mahal (Agra), 11
 decoration of, flower style used, 87
 talking tree (of the Alexander legend), 74
 tapestries, imported from the West, 26
 temples, Hindu, 11, 37
 tent furnishings, 95, 105, 133
 Textile Museum (Washington, D.C.), 102, 124, 133; figs. 7, 22, 36, 41, 90, 125; cat. nos. 1b, 5, 7a
 textiles:
 centers of production of, 129
 drawloom-woven, 33
 as hangings, 128
 related to carpets, 31, 47
 repeating patterns in, 31, 47
 Thompson, Jon, 105
 Thyssen-Bornemisza, Carmen, Collection, fig. 92; cat. no. 21
 Tibet, western, carpet materials from, 23
 Tibeto-Ladakhi-Mughal War (c. 1681–84), 23
 tiger, frontal view of, motif, 52, 67
 Timur (Tamerlane), 3, 11, 77
Timur Granting an Audience in Balkh on the Occasion of His Accession to Power in April 1370 (from *Zafarnāma* [Book of Conquests]), 75, 76; fig. 70
 Timurid art, 74–80
 appreciation of, at Mughal court, 77
 Tokugawa Art Museum (Nagoya, Japan), 146; fig. 52
 ton-sur-ton effect, 26, 67, 93
 Toyama Memorial Museum (Saitama, Japan), 138–46; fig. 47; cat. no. 9
 trade routes, Europe to India, 15, 20
 trading centers (warehouses, factories) of Europeans in India, 15
 tree carpet patterns, 102
 See also under carpets (specific)
 Turkish carpets, 15, 136
 materials used for, 21
 Turkish Sultan’s house, Fatehpur Sikri, carved sandstone wall, 30, 32, 45; fig. 18
 Turks, 3
Tuzuk-i Jahāngīrī (The Memoirs of Jahāngīr), 8
Emperor Jahāngīr Weighs Prince Khurram from, manuscript page, 8, 9, 33, 47, 76, 76, 118; figs. 2, 72
 V
 vase carpets, Persian, 117, 119
 Victoria and Albert Museum (London), 134; figs. 1, 30, 35, 49, 105, 107, 108, 115, 126; cat. no. 27
 W
 Walters Art Gallery (Baltimore), 100; fig. 12
 Wantage Album, 11
 Warangal, carpets made in, 133, 134, 150
 warps:
 materials used for, 21
 structure of, 27, 119
 watercolors:
 Jahāngīr Preferring a Sufi Shaikh to Kings from St. Petersburg Album (Bichitr), 121, 124; fig. 121
 Krishna Enthroned, Attended by Gopis from *Rāgamālā* (Garland of Memories, dispersed set), 146, 147; fig. 142
 Nautch Party in a European Mansion, 124, 129; fig. 126
 Prince with a Falcon, 45, 45; fig. 37
 Raja Dip Chand of Bilaspur Listening to Singers, 117, 117; fig. 115
 Shāh Jahān Nimbed in Glory (Chitarman), 22, 22; fig. 8
 Simurgh Attacking a Gaja-simha Clutching Seven Elephants in Its Claws, 40, 40; fig. 30
 weavers:
 origins of, in other countries, 7, 21, 27, 117, 133
 working conditions of, 6
 wefts:
 materials used for, 21
 of multiple colors and materials, 22
 structure of, 27
 weld (*Reseta lateola*) dye, 24
 Western art. See European art
 wisteria motif, 33, 67
 Wolf, Marshall and Marilyn R., Collection (New York), fig. 132; cat. no. 38
 wool, 21, 22–23
 woolen carpets, origins of, 5
 Worshipful Company of Girdlers (London), figs. 11, 62; cat. no. 14
 Y
 Ydema, Onno, 20
 yellow dyes, 24
 Z
Zafarnāma (Book of Conquests), 76
Timur Granting an Audience in Balkh on the Occasion of His Accession to Power in April 1370 from, manuscript page, 75, 76; fig. 70
 Zaqqūm (tree of hell), 74

Photograph Credits

In most cases, photographs were provided by the institutions or individuals owning the works and are published with their permission. Their courtesy is gratefully acknowledged. Additional information on photograph sources follows:

© Bildarchiv Preussischer Kulturbesitz: Figs. 39, 40, 71
Philip A. Charles: Figs. 9, 48
Steven Cohen, London: Fig. 26
Erik Cornelius, Stockholm: Fig. 6
Courtesy of the Arthur M. Sackler Museum, Harvard
University Art Museums, Cambridge: Figs. 4,
87, 142
Laurent-Sully Jaulmes, Paris: Figs. 32, 66, 68
Joaquín Cortes Noriega Fotógrapho, Fuenlabrada,
Spain: Figs. 56, 57, 74, 75, 113
Samar S. Jodha Photography, New Delhi: Figs. 61, 106
Nobuko Kajitani and the JDR III Fund: Fig. 97
Anna-Marie Kellen, The Photograph Studio, The
Metropolitan Museum of Art: Figs. 132, 133
M. Kitcatt, London: Fig. 35
Ebba Koch, New York: Figs. 18, 19, 83, 85

Oi-Cheong Lee, The Photograph Studio,
The Metropolitan Museum of Art: Fig. 38
(reprinted by permission of the Shinjishumeikai,
Shigaraki, Shiga, Japan)
The Library of Congress, Washington, D.C.: Fig. 28
Longevity, London: Figs. 45, 46: jacket/cover
Prudence Cummings Associated Limited, London:
Figs. 43, 44
Robert Skelton: Fig. 50
Sotheby's, London: Fig. 65
The Textile Gallery, London: Fig. 122
The Victoria and Albert Museum, London: Figs. 100, 118
© Ole Waldbye, Copenhagen: Fig. 51
Daniel Walker: Figs. 60, 76, 77, 84
Stuart Cary Welch: Fig. 86
Bruce White, New York: Figs. 11, 62

